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INDUSTRIAL HISTORY OF THE UNITED STATES

By

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TO MY WIFE



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PREFACE

The shock and upheaval of the World War crowded into the background American industrial experiences of every earlier period. The precedents of the Civil War era are as far away from the present as were, before 1914, those of Revolutionary times. The deepest strata of the business structure of the world have been rudely shaken.

National debts have swelled to proportions formerly unconceived; currencies have been inflated in some instances beyond hope of redemption; a great part of the world's gold reserve has like a tidal wave inundated a single continent. Markets have been wiped out and new ones have been developed, while national rivalries for foreign commerce and for natural resources have been spurred to fresh exertions. Labor has risen to an influence beyond any that it held in the past, and at the same time capital has extended its power and broadened its field of activity. Withal there has come an increasing realization of the mutual dependence of business and human society and of the obligations of each to the other. New problems have risen and familiar ones have assumed changed and bewildering aspects—problems of labor supply, of productive utilization of machinery, of finance, of markets, and of trade cycles.

The student seeking comprehension of the new industrial world in which he is soon to participate, needs not only an understanding of the fundamentals of economics, the principles upon which all industry is based, but also a broad grasp of the facts of history, interpreted from the point of view of their bearing upon the practical questions of today.

It is in an effort to aid in meeting this need that the present volume has been prepared. The development of

American industry has been studied in historical sequence, but with the constant thought of the importance of the events of the past in relation to conditions of the present and of the future. For in matters industrial no less than in those related to governmental and international affairs, the best means of judging conditions of the present is by the experiences of the past.

The author has had access to practically all the accepted sources of information. In seeking the interpretation of historical events, and their application to present-day situations, he has drawn freely upon his own experience in active connection with industry. He has endeavored to include explanations of economic principles where they have seemed necessary for an understanding of narrated events. Likewise, explanations of industrial, financial, and labor practices have been given where it has been thought that they would add clearness to the text. Statistics gathered by business and private organizations, as well as census and other government reports, have been used freely. To whatever extent has seemed advantageous, use has been made of the existing books on the general subject of industrial history, as well as those upon the various special topics treated in the narrative.

To the friends and associates who have aided in the task by their encouragement and suggestions, and by criticism of portions of the text, the author acknowledges deep obligation.

EDWARD S. COWDRICK

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CONTENTS

CHAPTER	PAGE
INTRODUCTION	I
Part I—Before America Became a Nation	
I THE ECONOMIC BACKGROUND IN ENGLAND . . .	9
II THE DISCOVERY AND EXPLORATION OF THE NEW WORLD	23
III INDUSTRIES IN THE AMERICAN COLONIES	33
IV LABOR IN THE COLONIES; SPREAD OF POPULATION; FINANCE	42
V THE STRUGGLE FOR INDEPENDENCE	50
Part II—The Nation in Its Formative Period	
VI EARLY DAYS OF THE REPUBLIC AND THE STRUGGLE AGAINST COMMERCIAL AGGRESSION	59
VII THE BEGINNINGS OF MANUFACTURING IN THE UNITED STATES	71
VIII ALEXANDER HAMILTON, THE DEBTS, AND THE FIRST BANK OF THE UNITED STATES	82
IX THE SECOND BANK OF THE UNITED STATES, ANDREW JACKSON, AND THE PANIC OF 1837	92
X THE CONQUEST OF THE WEST	102
XI THE DEVELOPMENT OF TRANSPORTATION	112
XII TARIFF LEGISLATION, 1789 TO 1857	123
XIII FORTY YEARS OF PROGRESS IN MANUFACTURES . .	133
XIV THE CONDITION OF AMERICAN LABOR BEFORE THE CIVIL WAR	142
XV THE SOUTH, COTTON, AND SLAVERY	154
XVI SPREAD OF SLAVERY INTO THE WEST AND THE DRIFT INTO WAR	162
XVII PAYING THE COST OF THE CIVIL WAR	171
XVIII BUSINESS AND LABOR DURING THE CIVIL WAR . .	180
Part III—The United States As a Dominant Industrial Power	
XIX FINANCIAL PROBLEMS OF RECONSTRUCTION; THE PANIC OF 1873	191

CHAPTER	PAGE
XX AGRICULTURE AND THE SETTLEMENT OF THE WEST	201
XXI RAILROAD EXPANSION AND CONSOLIDATION . . .	211
XXII RAILROAD REGULATION; OTHER TRANSPORTATION DEVELOPMENTS	221
XXIII THE AGE OF COAL AND STEEL	229
XXIV THE SUPREMACY OF MANUFACTURING INDUSTRY .	239
XXV THE ADVANCE OF THE AMERICAN WORKER . . .	251
XXVI THE DEVELOPMENT OF LABOR ORGANIZATION . . .	260
XXVII LABOR ANTAGONISM AND ITS RESULTS	267
XXVIII INDUSTRIAL CO-OPERATION AND CONCILIATION . .	280
XXIX "BIG BUSINESS," THE CORPORATION, AND THE CON- CENTRATION OF CAPITAL	290
XXX THE UNITED STATES STEEL CORPORATION . . .	303
XXXI ANTI-TRUST LEGISLATION AND PROSECUTION . . .	312
XXXII PROGRESSIVE PROTECTION IN TARIFF LAWS . . .	321
XXXIII COINAGE CONTROVERSIES AND THE SILVER ISSUE .	330
XXXIV THE CAMPAIGN OF 1896; LATER COINAGE DEVELOP- MENTS	340
XXXV NATIONAL BANKS AND THE FEDERAL RESERVE SYSTEM	346
XXXVI GOVERNMENT FINANCE DURING THE WORLD WAR	357
XXXVII TRANSPORTATION PROBLEMS OF THE WAR PERIOD AND AFTER	364
XXXVIII WARTIME CONTROL OF INDUSTRY AND TRADE . .	372
XXXIX COMMERCIAL GROWTH, EXPANSION, AND INFLATION	381
XL BUSINESS COLLAPSE, STAGNATION, AND RECOVERY	388
XLI RESTRICTED IMMIGRATION AND A DEVELOPING LABOR SHORTAGE	399

INDUSTRIAL HISTORY OF THE UNITED STATES

INTRODUCTION

Importance of Economic Motives.—Man is a working and accumulating animal. His leading interests and his most compelling motives are primarily economic. His efforts along lines of manufacture and trade; of work, wages, and profits, far outweigh those expended upon art and literature, upon politics and war. Moreover, many human activities for which economic motives do not appear upon the surface, nevertheless are fundamentally the results of deep currents of material interests and influences. Thus the need for commercial markets or for colonies to which to send the surplus of a population which has outgrown the food supply, may impel a nation to a war for which the superficial cause is resentment of some petty international offense.

If the supremacy of the economic motive in human actions is true of the world at large, it is true particularly of the United States, where progress always has been based largely upon the nation's advantages in natural resources and upon the industrial energy and ingenuity of its people. He who would search out the real springs of American thought and action must go beyond the superficial expressions found in politics, in society, and in sports, and must go to the mine, the workshop, and the office and mark the American at his work.

In view of this paramount importance of industry in the life of the nation it would seem reasonable to expect that edu-

cated persons would be well informed upon the economic history of their country; that they would know the facts regarding the development of manufacture, of labor, of finance, and of commerce, and would be able to interpret those facts in their bearing upon the problems of the present day. In the main, the contrary is true. There is urgent need of a wider spread of knowledge upon this important subject, presented intelligently and without the bias of selfish interest.

The English historian Gibbins, writing for and about his own countrymen, says :

Unfortunately, few historians have thought it worth while to study seriously the economic factors in the history of nations. They have contented themselves with the intrigues and amusements of courtiers and kings, the actions of individual statesmen, or the destructive feats of military heroes.

The Value of Historical Study.—But, it may be asked, granted the primary importance of economic motives and material interests, what useful end is to be gained by studying the economic facts of the past? Is not the present towering industrial structure sufficiently impressive so that we may profitably give it our undivided attention? Why explore the historical foundations upon which it rests?

The answer is to be found by explaining the utility of historical study of whatever type. It is not for reasons of academic curiosity that military men pore over charts illustrating the battles of Napoleon. It is not for mere mental diversion that practical statesmen delve into the records of the constitutional reasoning of Chief Justice Marshall. History is of service mainly—one is tempted to say solely—as it lends aid in solving the problems of the present time.

This view of the utility of historical knowledge has not always been recognized. Many a man of our own generation harbors a deep-seated prejudice against the whole subject of

history—ancient and modern, sacred and profane—because in his school days he was required to memorize the names and dates of the Plantagenet kings, none taking the pains to direct his thought toward the profound influence of early English history upon constitutional and social development not only in England but in America as well.

Thus it is with industrial history. The reader may learn that Henry VIII debased the English coinage in an effort to get more money to pay for his extravagances, and he is likely to say, "Well, what of it?" His reaction will be different when he learns that this bit of royal piracy in finance was an important factor in raising the cost of living and impoverishing the working classes, and that these effects, in turn, powerfully influenced the growing need for English colonies and thus contributed to the settlement of the New World and to the founding of the United States of America.

The Sweep of Industrial Development.—A narrative of industrial history will have failed in its purpose unless it gives to the student, the teacher, or the general reader a comprehensive view of the majestic sweep of progress which has carried industry forward in an orderly evolution. For it must be remembered that in industry there is no such thing as the "good" old times. He who complainingly contrasts present-day conditions with the supposedly blessed state of his ancestors, reveals little else than the imperfection of his own knowledge.

The economic evolution to which we have referred may be discussed under three heads:

1. **Physical.**—Primitive man was engaged in a life and death struggle with nature. Day by day and year by year he faced the menace of starvation. Except in the most beneficent climates, his whole effort was required to obtain the bare necessities of life.

The history of human industry has been, on its physical side, a story of the gradual winning of control over nature, to such an extent as vastly to increase the store of material things available for mankind. It was no mere temperamental bias that led our ancestors of only a few centuries ago to find themselves too greatly crowded in a population which in our day would be insignificant; it was the practical fact that there was not enough production to go around. At the time of the Norman Conquest, a mere handful of people—some 2,000,000—seemed to exhaust the supporting capacities of the English kingdom.

For its comfort, its opportunity for leisure and culture, and for its very life, the human race of today is dependent upon the circumstance that nature has been forced to yield material products vastly multiplied from those of primitive times. This material wealth has been distributed among the population. It exists in the form of physical comforts and luxuries; of largely increased incomes for all classes, including even the least skilled workers, and of accumulated capital by means of which production is yet further stimulated.

In this increase in the production of material things, many influences have been at work through the ages. Among the first, and still one of the most important, has been the better utilization of land. When men subsisted upon game and wild fruits, many square miles of forest or prairie was required to provide nourishment for a small tribe, and every man in the tribe was hard put to it to gain his share. The first rude beginnings of agriculture added immensely to the food capacities of the land. Today, the cultivated portion of the United States, tilled by a minority of the population, supports more than 100,000,000 people in a degree of comfort never before known on the earth.

This increase in the productiveness of the land has been brought about in large measure by the use of accumulated

wealth in the form of capital. A farmer without tools or machinery or means of transportation would escape starvation, if at all, by a margin as narrow as that which preserved his ancestor of the Stone Age. The savings made out of the surplus products of human effort, when turned into tools, machines, factories, and privately owned land, reinforce the efforts of the farmer and the artisan and enable him to produce many times more than he could do by his unaided strength.

In recent years a specialized use of capital is found in what is known as "finance," by which huge stores of money and credit are made available to industry, again largely increasing its productiveness.

2. Intellectual.—In medieval times, commerce, manufacture, and finance were left to the attention of those who were unfitted by birth or by spirit for the princely vocations of warfare and pillage. The efforts of the best minds were given up to government or to military affairs, or sometimes to the church. Business was distinctly an inferior calling. Faint survivals of this sentiment are to be detected in certain circles of society today. In the main, however, it has come to be recognized that industry provides a field for the very highest human capacities. The problems of business challenge the best abilities of the race. The result has been an enormous improvement in economic vision and in industrial and financial methods.

But there is another side to the intellectual evolution of industry. It is to be found in the viewpoint of the public. It would be interesting to trace the changing opinions on vital subjects connected with business. A mere few decades ago the Knights of Labor suggested that a workman ought to receive compensation for an injury resulting from insufficient safety precautions. The proposal was deemed revolutionary. Today by the laws of most states the laborer is compensated

for injuries, even though the employer or the factory may have been in no way to blame.

Another example of this intellectual evolution is to be seen in the steadily improving public understanding of the problems of business, and of the services rendered by large aggregations of capital. Even among politicians, the desire to "bust" a "trust" because of its mere bigness, is gradually disappearing.

3. **Moral.**—But we will miss much of the significance of economic evolution if we fail to take note of the steady gain in ethical conceptions. Here again, the improvement is to be found partly in the business men themselves and partly in the community—and each has reacted upon the other.

At the beginning of the factory system in England, society at large was tolerably complacent over the indescribable misery of a large part of the wage-earning population. It was not until the danger of the spread of factory-born epidemics caused the public to fear for its own safety that a law for the amelioration of conditions was passed.

In later years, and in our own country, the public long was indifferent to long hours and unhealthful conditions, to child labor, and to many other abuses. The passing years have seen a steady increase in the sensitiveness of the community conscience.

Equally noteworthy has been the development of business ethics as practiced by business men themselves. In the highest and most successful industrial circles of today, the minds of the leaders are attuned to moral concepts to a degree often unsuspected by the man in the street. Practices which a generation or two ago were sanctioned by business and society, in our day often would bar their sponsors from stock exchanges or chambers of commerce. The fact of the advancing standard of business ethics is vital. It is no more to be overlooked than

is, for example, the fact of the increasing utilization of capital and the machinery of production.

Development, Evolution, and Interpretation.—In the following chapters we shall trace the origin, the development, and the characteristics of American industry, having in mind this evolutionary point of view. We shall seek for relationships between facts which on the surface sometimes appear isolated, and for explanations of events which to the superficial observer seem to be the results of mere chance. Likewise we shall keep in mind the importance of interpreting the facts of the past in relation to the problems of the present and of the future.

In this way, it is to be hoped, our study of the industrial history of the United States may be made to serve the purposes which offer the greatest possibilities of usefulness.

Part I—Before America Became a Nation

CHAPTER I

THE ECONOMIC BACKGROUND IN ENGLAND

Industrial Development of America.—The economic development of America is one of the marvels of human progress. History affords no parallel to the majestic sweep of events by which the continent was discovered, colonized, and reclaimed from the wilderness; forests and prairies gave way to make room for farms, which, in their turn, often were replaced by towering industrial establishments and cities crowded with workers; transportation systems were devised and developed, then abandoned to make place for others better fitted for changing needs; and commerce and finance were built up to proportions before which a world stands in wonder.

The events which mark this development were not isolated; their sequence was not governed by chance. They present an orderly evolution, tied closely into the experiences of the human race. For their origin we must search in remote ages and on distant continents; the imagination is baffled in the attempt to chart their future course.

The driving power behind most actions of the individual man is the need for food, clothing, shelter, and material well-being. Economists long since taught us that the compelling motives of the human being are primarily economic. That which has been less clearly comprehended is that similar wants have been the forces which largely have determined the history of nations. With the nation, as with the individual, the family, or the tribe, the underlying motives for most actions are to be

found in economic wants. Even those international animosities which have led to wars have in most cases been closely bound up with clashing interests in the markets of the world or with rivalry for the possession of territory which could be developed or exploited.

Economic Key to Human History.—It is therefore to industrial history—to the record of human activities in production and commerce; in all the factors relating to the earning of livelihood and the accumulation of wealth—that we may look with confident expectation of tracing the relationships between human impulses and external events. The older historians, with their eyes upon battles and dynasties, were able to trace these relationships imperfectly; often they failed altogether. For national movements they sought explanations in politics or in religion, or in the ambitions or caprices of warriors and monarchs. Sometimes they found explanations, real or imaginary; sometimes they failed, and attributed events to mere chance. Many of the facts which have perplexed the historians whose viewpoints have been wholly political, or upon which their judgment has been in error, can be interpreted with unfailing accuracy by one who seeks the economic motives beneath human action.

This economic interpretation can be applied best of all to the history of the United States—the pre-eminently industrial nation of the world. We shall see in later chapters that America was discovered in response to an economic need; that it was colonized in response to another need, later and different, but also economic; that each important step in national development came in response to the material needs of the people and at the time when those needs had become urgent. Thus—briefly to anticipate our narrative—the steamboat, the canal, and the railroad, none of them wholly new in principle, came into use at the time when the expanding needs for

transportation made them essential to the full development of the country. Likewise the corporation as a form of business organization, although it had existed at least since the Middle Ages, and had been used to some extent in the United States from the very beginning of the government, became common after the growth of industrial enterprises made the individual ownership or the partnership inadequate for business needs.

In recognizing this dominant economic motive running through human history, we should not fail to understand that often its effect has been profoundly influenced by factors outside the field of economics—by moral, spiritual, or personal motives. Thus the religious bigotry of Louis XIV led to the revocation of the Edict of Nantes, drove from France many thousands of her best workmen and merchants—in direct conflict with the economic interests of the country—and actually brought industrial benefits, not to France but to her most powerful commercial rivals. These isolated instances, however, frequent and significant as they are, serve but as modifying influences, not as contradictions of the rule. They emphasize the fact that in the evolution of human institutions, as in physical evolution, a seemingly normal course may be veered aside or even reversed by some outside influence.

Old-World Roots of American Industrial Civilization.—

American industrial civilization, as we have noted, is not a thing apart, isolated from the rest of the experiences of the human race. Its roots reach far back in history and the origin of many of its institutions is to be sought for in conditions and customs which prevailed many centuries before the nation was born. The industrial development of the Anglo-Saxon race began even before that race had established itself on the island of Britain. For practical purposes, however, we may take our start from the England of the Middle Ages, and note the economic events which are the common heritage

of modern England and modern America. In the remainder of this chapter, we shall pass briefly in review those facts of English history which are of importance as a preparation for our study of industrial development in the United States.

It must be noted at the outset that the England to which we now turn our attention was a vastly different England from that of the present day. In the modern sense it was not an industrial nation at all. Instead of the huge cities, the crowded population and the giant industries of today, we find an island sparsely populated, supplied with forests which provided fuel during the centuries in which the wealth of the coal deposits was ignored, and with the energies of its people devoted almost wholly to agriculture. When the Normans under William the Conqueror subdued the Saxons (1066) the estimated population of the kingdom was about 2,000,000, of whom three-fourths lived by tilling the soil. Manufactures were few and of the rudest household type. Commerce scarcely had begun to develop. Learning was confined to the clergy. The numerous class of the nobility devoted itself mainly to landholding and to war.

Moreover, such was the inefficiency of the industrial system that the handful of people populating the kingdom seemed to be about as many as the island could support. Economically, England was almost as "crowded" during the reign of William as it is today.

The Feudal System and Its Effect upon Industry.—The England of the Middle Ages produced little and therefore its inhabitants were poor. It may be said to have been midway between those primitive human conditions in which each man hunted, cultivated, and starved for himself alone, and the modern system under which the co-operative efforts of the whole community produce a surplus over actual needs which may be distributed in the form of wealth. The landowners

and the nobility lived in a degree of splendor but without comforts. The common people existed in the poverty which was considered the normal state for their class.

The explanation of this condition lies in part in the ignorance, the barbarism, and the squalor into which the western world had relapsed after the downfall of the Roman Empire. A potent element, however, is to be found in the system under which the country was cultivated and its few commercial enterprises were conducted. Under the Anglo-Saxons and the early Normans, labor conditions were regulated, as were society and government, by the feudal system. Under this institution the land was divided into large estates, held by powerful nobles, and usually as grants from the king. We are not here concerned with the elaborate social and military system built up under feudalism, except to note, in passing, that it was responsible for the upgrowth of rigidly defined classes among the population and that this class division was carried over into the economic life of the people. To some extent, these class distinctions survive in European countries down to the present day, and complicate the industrial problems of those countries.

On the estates of the nobles the land was cultivated by two classes of laborers—villeins and free tenants. The villeins held plots of land which they were privileged to cultivate for themselves. They were, however, bound to the soil—that is, they were forced to live permanently upon the estates of their overlords—and they were required to till the fields of the landowners. Thus their condition was somewhat that of independent farmers and also somewhat that of serfs. The free tenants were not bound to the soil, but paid rent to their overlords in money, products, or labor.

Some of the land was cultivated under permanent tenure, by which one man reaped the crops from the same tract year after year. Much more, however, was subject to a half-com-

munistic system, by which large areas were held by entire communities, either as pasture, as waste land, or in tracts where each man's right to cultivate ended with one season's harvest. To the appalling inefficiency and waste of this agricultural system is due, in large measure, the fact that England, with a population of only about 2,000,000, was hard put to it to find food, clothing, and shelter for her people. Crops were few and undiversified. Under a rude and unintelligent agriculture the land produced only a fraction of what it did in later centuries. Lean sheep grazed in the common pastures and starved in the winters because their owners had not learned to raise the feed crops needed for their proper support. All in all, the farming system was one upon which any civilized agricultural nation of the present day would starve. Yet, as we shall see, the gradual reformation of this farming system, a few centuries later, brought misery and increased poverty to thousands.

The Origin of the Laboring Class.—In the years between 1200 and 1500, villeinage gradually declined, while the number of free tenants increased. The more fortunate or more ambitious villeins and free tenants became small proprietors, controlling their own lands through ownership or rental. The less efficient became hired laborers cultivating the fields of their richer neighbors. And here we may observe the origin of the "laboring class," which has survived in Britain to the present day and of which the class consciousness is one of the factors which complicates the English labor problem. For from these hired farm hands of the centuries before 1700 there developed the whole body of industrial workers who in later generations have toiled in mines, mills, and factories.

It is unsafe to generalize too much about the condition of the laboring classes between the Norman Conquest and the close of the eighteenth century. Chronicles are conflicting

and often reflect the ideas of comparison in the minds of the authors. It is undoubtedly true, also, that the conditions of the workers varied widely in different localities, in different occupations, and in different periods. In the centuries before 1500, it is probable that the working classes in England enjoyed a fair degree of comfort and prosperity, although their manner of life would be scorned by the poorest American toiler of today. Their earnings were meagre, but usually each worker's cottage was set in a small plot of ground where he raised food to supplement his yearly wage. All in all, the income of the laborer appears to have been sufficient for the modest needs of his time and of his class. It was a rude age, in which even the rich had few comforts and lacked many of the conveniences which we have since learned to look upon as necessities.

The Great Plague and Its Effects.—Slowly England emerged from the Middle Ages. Profound changes came in agriculture, in trade, and in the gradually developing manufactures. One series of changes, the effects of which were felt in every department of life for centuries, was ushered in by the Great Plague, an epidemic which in 1348 swept away a third of the population of the kingdom.¹ The poorest of the people, and therefore those among whom the mortality was greatest, were the laborers. The frightful ravages of the epidemic among this class of the population caused a scarcity of workers, which, through the invariable action of the law of supply and demand, brought increases in wages.

Now, it is an industrial phenomenon which may be observed in all ages down to the present time, that when the labor of human beings is scarce or expensive, the employer seeks means to lessen his dependence upon the labor element. In the

¹ Contemporary and historical accounts of the plague differ widely as to the number of victims. The estimate of a third of the population is conservative.

England of the fourteenth and fifteenth centuries, industry mainly meant agriculture. A resort to the use of machinery was impossible; the age of agricultural machinery was not to open for many generations. The landowner, however, could and did improve his methods of cultivation, utilize more land through encroachments upon the fields formerly left unfenced, and cast about for gains which could be earned with the application of less human labor upon the soil.

England Turns to the Wool Industry.—Faced with a shortage of laborers and with the necessity of paying higher wages than in the past, many landlords turned their attention increasingly to sheep raising, an industry which had been carried on in a desultory manner for several centuries. An estate could be utilized for the raising of sheep with the expenditure of far less human labor than was needed in the cultivation of food crops. The extension of sheep raising, with the other changes in agricultural methods which came at about the same time, together with the natural increase of population, more than offset the scarcity of laborers resulting from the plague. In less than two centuries there was a surplus of labor, and a new set of problems developed.

Wool raising, and the wool manufacture which gradually supplanted the earlier custom of exporting most of the raw product to the continent, were of immense benefit to England. They formed much of the foundation upon which was to be erected the manufacturing supremacy of the country. These benefits, however, were bought at the price of much suffering and hardship for a large part of the population. Not only did the demand for agricultural labor decline. Landowners, attracted by the increasing profits of wool production, sought to utilize more and more land for that purpose. Small farmers were driven from their homes, or their rents were raised to levels which forced them to move. Others who owned their

land were induced to sell, and then joined the ranks of the wage-earners or of the unemployed. Many farmers thus became common laborers, sometimes even paupers.

Another feature of the period, which some historians have called the "agricultural revolution," was the growing custom of enclosing common or waste land. Sometimes legally, sometimes by ruthless exercise of power or of corrupt influence, the large landlords succeeded in getting possession of enormous acreages which formerly had been open to rich and poor alike.

Thus the growth of the wool industry and the change in the methods of agriculture, both beneficial in their final outcome and essential to the development of the industrial England which was to emerge in the eighteenth century, brought to many thousands of the population the hardships which seem well-nigh inseparable from transition periods in economic life. It appears, in fact, that for nearly three centuries after about 1500, the condition of the working class steadily declined. The historian Gibbins says of the changes just described, that they "resulted in the pauperization of a large portion of the working classes and the impoverishment of the small farmers. On the other hand the nobles and the landowners gained considerable wealth."

Growth of Commerce.—Another important factor in the transition period which preceded the establishment of the factory system was the steady growth of foreign trade. From an isolated agricultural country, England became a powerful shipping and commercial nation, and by about the time of Elizabeth she had reached a position of importance in the international rivalry for trade. This trade brought to the country greater wealth, diversification of industries, and a closer contact with the rest of the world.

Through this commerce, also, England came to share in the new supplies of gold and silver brought to Spain and Portugal

from their newly appropriated possessions in the western hemisphere. An increase in the supply of the precious metals resulted, as was inevitable, in a decline in the purchasing power of money. At somewhat the same time King Henry VIII, pressed for funds to carry on his extravagant government, debased the currency, thus causing an increase in prices of commodities. The wages of the laborer did not keep pace with these increases in the cost of living. His poverty became destitution or pauperism. As we shall observe in the following chapter, these conditions had much to do with the era of migration which led to the planting of the English colonies in America and to the later founding of the United States.

The Industrial Revolution.—The economic changes of the two or three centuries before the year 1800, of which some have been described and others cannot be included in this brief outline, are a part of what has come to be known as the "Industrial Revolution." By this is meant the series of developments by which English industry emerged from its medieval conditions and the factory system was established. The Industrial Revolution serves as a starting point for the study of all subsequent history of industry in England and in the United States. From the Industrial Revolution we can trace, in an almost unbroken line, many of the most important problems of production, of distribution, and of labor which have survived down to the present time. The Industrial Revolution reached its climax in the latter part of the eighteenth century, when a series of epoch-making inventions and discoveries changed the whole aspect of industry and led to the establishment of factories which in essential principles resembled those of the present day.

As we have noted, the increase in sheep raising which followed the Great Plague led gradually to the upbuilding of a textile manufacturing industry—the spinning and weaving of

wool. At first this work was done almost wholly in the homes of the workers. Gradually, small factories were established. But these factories were merely assemblies of spinners and weavers under one roof and with one employer. For manufacturing in the modern sense they lacked two essential elements—power and machinery. And as the growing commerce and industry of England called for greater output, these essentials were supplied.

In 1770 Hargreaves patented the spinning “jenny.” In 1771 Arkwright invented the “water frame” for spinning. In 1779 Crompton combined the principles of the two earlier processes and invented the spinning “mule.” In 1785 Cartwright invented the power loom for weaving cloth.

As textile machinery came into use, better facilities for power than those previously in use were necessary. For the providing of this power, another series of inventions came to the service of industrial England. The inventions of Savery and Newcomen in 1698 and 1705 already had furnished a mine pump operated by the condensation of steam. This gave a great impetus to the previously small and unimportant industry of coal mining, and made it possible to utilize the immense stores of concentrated fuel lying beneath the surface of the earth. One effect of this use of coal was seen in the quick stimulation of the iron industry, which we shall reserve for consideration in later chapters. Another was seen in the securing of a more efficient fuel for power purposes. Discovery of a means of utilizing the new fuel in the growing factory system did not lag far behind. In 1769 Watt made improvements in the steam engine which made it practicable to operate factories by steam power. With this invention, and those connected with spinning and weaving machinery, the factory system may be said to have been fairly started.

Dazzled by this brilliant series of inventions, many students have reached the superficial conclusion that the improvements

in mechanical processes were the primary cause and the leading phenomenon of the Industrial Revolution. The Industrial Revolution, however, was broader and more fundamental than mere mechanical improvements. It was the culmination of the whole series of changes in industry which had been in progress since the Middle Ages, and some of which we have observed. The mechanical inventions, wonderful and essential as they were, may be said to have been effects no less than causes; they were brought forward by the needs which had become manifest in a changing industrial society. The Industrial Revolution furnishes in fact one of the most striking examples of the common human experience that mechanical inventions usually appear about the time when the need for them has developed.

Effect of the Industrial Revolution upon the Workers.—

A long-time view of the Industrial Revolution shows that it worked to the benefit of all classes by enormously increasing production—the total of commodities available for distribution. At first, however, it appeared to make worse the already almost hopeless condition of the English workingman. We have seen that the beginning of the factory system found the laborer impoverished and in many instances pauperized. This condition had much to do with the abuses which soon grew up in the newly established factories. Laborers, unemployed and in want, flocked to the factory towns, where they were glad to obtain work on any terms. No regulatory laws had been enacted, and the workers—men, women, and children—practically were at the mercy of the employers. Factories were operated with little regard for health and safety. Finally an epidemic in the vicinity of Manchester, which was traced to conditions in the factory district, caused the public to fear for its own safety, and resulted in the passage, in 1802, of the first English factory law. This was entitled an act “for the preser-

vation of the health and morals of apprentices and others employed in cotton and other mills." The hours of work, for children only, were reduced to twelve daily. Even this cautious reform was feared as being dangerously radical, and as a safeguard, some of the children were excluded from the benefits of the law.

Thus was begun the long series of factory acts which in later years have gradually improved the conditions of English workers.

New World Becomes an Industrial Factor.—While the Industrial Revolution was being completed in England, epoch-making changes had come to pass on the American continent, and a new nation had been born, inheriting many of the English customs and traditions. We shall now, therefore, consider some of the economic factors in the discovery and exploration of the New World, in its settlement, and in the separation of the English colonies from the mother country.

TOPICS FOR REVIEW AND DISCUSSION

1. What do you understand by industrial evolution? Why does industrial history furnish explanations for many national movements?

2. What was the principal occupation of Englishmen in the Middle Ages?

3. What was a villein? A free tenant? Describe the origin of the laboring class.

4. Why did a scanty population appear to be all that the country could support?

5. What were some of the effects of the Great Plague?

6. What were some of the causes of a decline in the condition of the working classes after about the year 1500?

7. What do we mean by the Industrial Revolution?

8. Describe the conditions of English factory workers about the year 1800.

9. Does the introduction of labor-saving machinery ordinarily

benefit or injure the workman? The employer? The public? Explain your answer.

10. Study in an encyclopedia or other reference work the life of Robert Owen; report on his efforts to improve labor and social conditions in English factory towns.

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CHAPTER II

THE DISCOVERY AND EXPLORATION OF THE NEW WORLD

The Migrations of Peoples.—Some of the most impressive spectacles in the economic, as in the political, development of the human race have been furnished by the migrations of tribes and nations. Impelled by motives which chroniclers in later ages often have but vaguely understood, uncounted hordes time after time have abandoned one land and descended upon another, there to take up their abode and found new nations. The wanderings of the Israelites and their settlement in Palestine is only one of the many migrations recorded in times of antiquity. The Middle Ages furnish numerous examples of movements of whole peoples in Europe and Asia. Some students of immigration assert that, until checked by the World War and later restrictive legislation, practically the whole Jewish population of Poland was in process of gradually transferring itself from that adopted land to the United States.

These national migrations usually have resulted from economic pressure. A strong nation, faced with the danger of starvation through famine or overpopulation, frequently would take possession of the fertile lands of less warlike neighbors. The latter often would migrate, following the lines of greatest promise and least resistance. In more recent times the tendency to migration often has been manifested in the form of colonization, as that of England in Australia; in the form of war, like that which resulted from Germany's attempt to secure more room for her population and more outlets for her commerce; or in the form of efforts like those being made by

Japan and Italy to find places to which they may send their surplus inhabitants as emigrants.

Many times in the past, the civilized world has reached a stage at which it seemed that its resources were insufficient to support its population. In the preceding chapter we saw that at the time of William the Conqueror, a population of 2,000,000 taxed the resources of England. These world crises in population often were relieved by plagues or by war—the plagues frequently being caused by famine and overcrowding, and the wars resulting from efforts of peoples to provide support for themselves by seizing the lands of their neighbors. At other times relief has come through discovery of new lands capable of supporting the surplus population. At yet other times—and this is true particularly in modern history—means of supporting increased populations have been found in new or improved industrial processes, by which production of the necessities of life has been enabled to keep pace with the growth in the number of consumers. Today the world seems again to be approaching a crisis of overpopulation. European nations were vastly overcrowded before the outbreak of the World War. They had sought relief in emigration—largely to America—until the United States, alarmed, enacted a law at the conclusion of the war which restricted immigration to definitely assigned quotas from each nation. What is to be the permanent relief for this latest population crisis only the future can answer. It is reasonable to presume, however, that the solution will come mainly in the form of improved industrial and agricultural processes.

The Discovery of America As an Economic Exploit.—Of all the movements of races and nations recorded in history, perhaps the most significant is the discovery of the western hemisphere and its incorporation, partially at least, as an annex of European civilization. The navigators, whoever they

may have been, who touched the continent before Columbus made no permanent settlements, and the world took little account of their discoveries. This fact we may interpret by saying that at that time the world had no need of another hemisphere. In 1000 European civilization had no necessity for more space. In 1492 it had little more need for land than in 1000. It was then, however, desperately in need of new routes by which to carry on commerce with India and China, and it was through the search for such routes that a new continent was discovered by what, if Columbus had known it, he probably would have classed as an unfortunate accident. In 1600 Europe did need fresh lands for the support of a surplus population, and then came the great era of colonization.

Trade Routes in the Middle Ages.—Why, it may be proper to ask, was America discovered more than a century before the nations which finally proved themselves capable of founding substantial colonies were ready to make use of it?

In the answer to this question we find an illustration of the fact that the world frequently waits upon the spirit of industrial enterprise to point the way to progress. The answer is in fact to be found in trade conditions of the Middle Ages. During that period much of the trade of France, Spain, Germany, and Holland was with the countries of Asia. England participated to some extent in this commerce. Adventurous merchants exchanged wool, metal ware, and other staple products of Europe for the spices, cotton, and jewels of Asia Minor, of India, and even of China. The risks of this traffic were compensated by extraordinary profits. In time the Orient, in the mind of the average European, became the symbol of boundless wealth and luxury. Stories brought back by travelers like Marco Polo further excited the imagination of the West.

This commerce with the East generally was conducted

over three main routes. One led from Venice, then a prosperous trading port, across the Mediterranean, down the Red Sea, and across the Arabian Sea to India. The second, likewise starting from some Mediterranean port of Europe, crossed the Mediterranean, then led by land to a point at which the waters of the Tigris or of the Euphrates river became navigable. Goods were then carried down one of the rivers and across the Persian Gulf and the Arabian Sea to some convenient Indian port. The third route led through the Mediterranean, across the Black and Caspian seas, then by land across central Asia to the cities of China.

Turks Close Commercial Routes to the Orient.—For some time this traffic was conducted with little serious opposition. Then came the conquests of the Mohammedans, and one after another of the countries of Asia Minor and northern Africa fell into the hands of the followers of the prophet. These conquests exerted a profound influence upon all subsequent history, and introduced problems—in politics, in religion, and in economics—some of which remain unsettled down to the present day.

As the Mohammedans extended their conquests, they wholly or partially closed the routes of trade between Europe and the East. Finally, in 1453, Constantinople, capital of the Eastern Roman Empire, fell before the Turks. After that the difficulties of commerce with the Orient were immensely increased.

Facing the danger of complete loss of trade with Asia, the European nations began to search for a sea route by which they could sail around the lands controlled by the Mohammedans. Thus, for reasons of economic necessity, was begun that series of brilliant explorations and discoveries which reached its climax when Columbus set foot upon the shores of the New World.

The efforts of the earlier explorers took two main forms: to reach India by sailing around the southern point—then undiscovered—of Africa; and to find a northern route to China by rounding the northernmost points of Europe and Asia. The first of these attempts was successful when in 1486 Bartholomew Diaz, one of a number of daring navigators attached to the Portuguese crown, rounded the southern extremity of Africa, and eleven years later Vasco da Gama pushed through the unknown water between the Cape of Good Hope and the shores of India.

Columbus Seeks Route by the West.—In the meantime an Italian sailor named Christopher Columbus (born at Genoa about 1456) who had sailed on adventurous voyages to various parts of the then known world, became interested in the belief held by some geographers that the world, instead of being a flat surface as nearly everybody believed, was in the shape of a ball or globe. He became convinced that he could reach China and India by sailing, not southward around Africa or northward around Europe, but directly west across the Atlantic Ocean. He thought the earth was much smaller than it really is, and estimated that even in the frail ships of his time he could reach the lands of eastern Asia in thirty or forty days. He had no idea that any considerable body of land would be found to bar his path to China. It is perhaps not too presumptuous to assume that, had Columbus realized the error of his reckoning and the actual immensity of the task set for himself, he never would have undertaken his voyage.

Explorers of the fifteenth century usually secured the patronage and financial backing of one or another of the European monarchs, who encouraged exploration in the hope of securing new lands, treasure, or trade privileges for themselves, their governments, or their favorites. Columbus first tried to interest King John of Portugal, then the most liberal

patron of exploration, but that ruler allowed himself to be persuaded that the Genoan's idea was visionary. After years of waiting and disappointment, Columbus finally sailed under the patronage of the king and queen of Spain. In 1492 he piloted his three ships across the uncharted Atlantic, and after a voyage which tested the steadfastness of commander and men, he landed upon one of the Bahama Islands.

Columbus died in ignorance that he had discovered a new continent. Already, however, adventurers from various nations were busily crossing the ocean and pushing into the interior, exploring the lands which, as they finally found out, were separated by another and broader ocean from the coveted wealth of the Orient.

Spanish, Portuguese, and French Exploration.—These early explorers of the New World at first were animated by the old quest for a route to Asia, and believed that they could get through or around the continent. Soon, however, their attention was diverted by the hope of finding gold and jewels in the interior of America. The silver and gold actually obtained by the Spaniards in their marauding expeditions in Mexico and South America were accepted as evidence that the New World was loaded with treasure, and that to secure riches beyond the bounds of imagination it was necessary only to push on and on into the depths of the continents.

Monarchs and governments entered with animation into this search for treasure. It was an age of intense national rivalry. Moreover, the accepted theory of political economy emphasized the idea that a nation's wealth consisted in its accumulations of gold and silver rather than in the products of industry. In our observation of the economic development of England, we noted that the precious metals secured in this race for the loot of a new world, proved to be far from un-mixed blessings.

At first, exploration was carried on most extensively by Spain, and to less extent by Portugal. Spanish colonization was based upon the desire for quick wealth for the mother country. While the exploits of the early Spanish explorers in some respects challenge our admiration, the settlements they founded were not of a type calculated to grow into free or prosperous communities. Trade was sternly restricted or monopolized by the government or its favorites. Natives were killed or enslaved. The economic development of the colonies and of their inhabitants was suppressed. Largely as a result of this policy, intensified through centuries of misrule, Spain and Portugal were shorn of their magnificent possessions in the New World.

While the Spanish and Portuguese were extending their conquests in the south, France, after tentative expeditions up and down the Atlantic coast of North America, had established her colonies and her sphere of influence in the northeastern region and in the Mississippi Valley. The French planted settlements and trading posts, conducted widespread explorations, and set up a profitable commerce in the products of North America.

England Begins Planting Colonies.—But it is not with Spanish or French exploration, however fascinating may be the stories of the conquistadores and of the Jesuit missionaries, that we are chiefly concerned. The colonies, which were to grow into the mightiest industrial nation of the world were those which were planted by England. England, however, was late in the field of colonization. Her voyagers, it is true, early established rights of discovery at some points on the Atlantic coast of North America, but it was many years before these explorers were followed by permanent settlers.

The explanation for this tardiness is found in industrial conditions in England. In 1492 and in the years immediately

following, there was felt no need for additional land—at least, the need was not pressing enough to be a motive for the uncertain ventures of colonization. We have seen, however (see Chapter I, page 16) that after about 1500 the changes in economic and agricultural conditions produced a steadily increasing burden of pauperism. Then, too, the population began rapidly to increase, and for some centuries it was not seriously reduced by wars or plagues. One Englishman wrote in the late sixteenth century:¹

It hath pleased God in his great goodnesse, of long time to hold his merciful hand over this realme, in preserving the people of the same, both from slaughter by the sword, and great death by plague, pestilence, or otherwise, that there are at this day many which live in such penurie and want, as they could be contented to hazard their lives, and to serve one yeere for meat, drink and apparell only, without wages, in hope thereby to amend their estates.

The writer therefore concluded, not without economic justification, that colonization, by removing some of those who could not find subsistence at home, would be “of generall benefit unto our cuntry.”

These changing industrial conditions formed the main incentive for English colonization in the seventeenth century. England soon had established settlements along much of the eastern border of what is now the United States. Not only was colonization, from the national standpoint, mainly an economic movement, but most of the individual colonization schemes were largely economic—some of them frankly mercenary. The earlier expeditions usually were financed by men who hoped for direct financial gains from the proceeds of whatever industries were developed by the settlers. True, many colonists crossed the Atlantic in search of political or

¹Quoted in *Economic History of the United States*, by Thurman W. Van Metre, page 34.

religious liberty, or to escape the consequences of political activities, but in numbers they were the minority. Some of the settlers hunted for gold and neglected the necessities of pioneer life with a fatuity equal to that of the Spaniards. In time, however, failure to find treasure and the stern necessity of warding off starvation, drove these adventurers to more profitable occupations.

However diverse may have been the motives of the English colonists, the settlements which they established soon began to exhibit marked differences from those of the Spaniards, of the Portuguese, and even of the French. Enforced hard labor and self-dependence bred in the settlers a strength of mind and body adapted equally to the struggles with the Indians and to the later development of independent national life. Moreover, ideas of self-government, brought across the sea by cavalier and puritan alike, furnished the seed from which was to spring a New World democracy. As we shall see, this democracy was not limited to things political. It early became identified with industry, and exerted a mighty influence upon the development of the country. As a result of all these factors, the English colonies attained stability and made progress in a manner sharply contrasting with the careers of the rival settlements to the north and the south.

The London and Plymouth Companies.—In 1606 the English government granted charters to two stock companies organized to plant colonies in America. To the London Company was assigned the land between the 34th and 38th parallels, while the Plymouth Company was authorized to settle between parallels 41 and 45. Under the London Company, the first permanent settlement was made in 1607 at Jamestown, in what became the colony of Virginia. The Pilgrims, under a charter obtained from the Plymouth Company, in 1620 landed at Plymouth and began the development of New England.

In the following chapters we shall observe the economic development of the English colonies, and seek to discover the beginning of that industrial progress which has been a striking feature in all eras of American history.

TOPICS FOR REVIEW AND DISCUSSION

1. Trace on a map the three main routes to the Orient before the Mohammedan conquests.
2. What sea routes did European explorers try to find after the land routes had been closed?
3. What were some of the economic incentives for the voyages of Columbus and other discoverers?
4. What were the characteristics of the Spanish colonies? Of the English?
5. When was Jamestown founded? Plymouth?
6. Show on a map the boundaries of the lands granted to the London and Plymouth companies.
7. Study in an encyclopedia or other reference work the life of Sir Walter Raleigh; report on his attempts at colonization.

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CHAPTER III

INDUSTRIES IN THE AMERICAN COLONIES

Early Search for Treasure.—We have seen that the English explorers and earliest colonists were persuaded, almost as thoroughly as were the Spaniards, that sudden wealth was to be obtained through exploitation of the New World. The enervating effects of this delusion were aggravated by the character of many of the settlers. Those who established themselves at Jamestown, as well as the members of yet earlier expeditions which failed to make permanent settlements, were drawn largely from the class of impecunious “gentlemen” with which the England of that day was oversupplied. Few of them had any idea of making America their permanent home. Almost without exception, they were averse to the hard labor which, as they finally came reluctantly to realize, offered the only solution for the problems of colonization.

Within a few years, however, the Virginia settlers awoke from their dream of speedy wealth in gold and jewels, and with their efficiency increased through the death or desertion of the weaker and less determined members of the community, they turned in vigorously to make a living, mainly by tilling the soil.

The Coming of the Pilgrims.—While the Virginia colonists were wrestling with their many problems, another band of settlers had landed (1620) on the inhospitable shores of New England. These were the Pilgrims, who had left England to find a home where they could practice without interference their religion, which did not conform to that of the

established church. The Plymouth settlers were of different type from their neighbors in Virginia. Few of them belonged to the aristocracy. All were accustomed to toil, and had no thought of subsisting otherwise than by the work of their hands.

Other English Colonies.—As the years passed, colony after colony was planted, until the strip of coast land from the French possessions on the north to Florida on the south was peopled—sparsely, it is true—with vigorous and self-reliant settlers, mostly of English stock.

With the political and military events of the more than 150 years between the landing of the Pilgrims and the opening of the war for independence, important as they were, we are not here mainly concerned. It is sufficient to note that the colonists grew in numbers and in wealth, and that their conquest of the wilderness and their conflicts with the Indians and the French made them hardy and self-reliant; also that they were compelled time after time to engage in disputes with the home government, in efforts to maintain the measure of self-rule to which they believed themselves entitled. Many of these disputes were wholly or partly over economic issues. They culminated in the Revolutionary War.

Agriculture First Means of Subsistence.—Let us now consider the means by which the English colonists, hemmed in by the ocean on the east and the trackless forests on the west, supplied their pressing needs. And at this point we should be on our guard, lest our search for the beginnings of modern American industry lead us into error. Industry, in anything like the modern sense, was of slow and feeble growth, and failed to reach impressive proportions during the colonial era. In a new country and without dependable outside source of supplies, the colonists first turned their attention to agriculture.

In some colonies, the settlers at first were not permitted to have any land of their own, but were expected to cultivate the land for the benefit of the individual or the stock company holding the charter. At other times, attempts were made to hold all the land in common, without private ownership. All these substitutes for individual landholding failed, like many others before and since that time, and before long in every colony each farmer had his own tract of land, which he was free to cultivate for the benefit of himself and his family. In the New England settlements the farms generally were small. In the south, different agricultural methods and different social ideas encouraged the establishment of large estates or plantations.

There were a few mechanics in the towns, and a smaller number of professional men, among whom the clergymen held the greatest prestige. There was also a class of merchants and shippers, whose importance increased steadily. Throughout the colonial era, however, farming was the main occupation of the people, and the typical colonist was a farmer, a plantation proprietor, or a farm laborer.

Settlers Learn to Raise Indian Corn.—The first crop cultivated extensively by the settlers, and one which doubtless saved many a pioneer family from starvation, was the maize, or corn, of the Indians. The colonists early learned to cultivate this grain by the Indian method—killing the trees by girdling or by fire, and planting the seed among the standing stumps, with a dead fish in each hill by way of fertilizer. Maize was the principal food crop until the end of the colonial era. Besides the native corn, the settlers experimented with various seed grains imported from Europe. Some of these were successful; many failed. In the middle and northern colonies, wheat and some other European grains were cultivated successfully. It was at first believed that the southern regions were admirably

adapted to the culture of grapes and silk worms, and years were spent in vain experiments along those lines before the true crops of these colonies were found. In time the settlers found that in the extreme south the most profitable crops were rice and indigo; in Virginia, tobacco. The extensive cultivation of cotton came in a later era.

Tobacco Chief Crop of Southern Colonies.—The use of tobacco among the American natives was remarked by Columbus. The plant was imported to England about the middle of the sixteenth century, and its use soon became popular. The Jamestown colonists thus found a ready market for exactly that product for which the climate, the character of the soil, and the dispositions of the cultivators seemed best adapted. In 1619 tobacco was exported to the extent of 20,000 pounds. By 1775 the annual exportation from America was 85,000,000 pounds, valued at \$4,000,000.

The extensive—in fact, almost exclusive—cultivation of tobacco in Virginia and some other southern regions had important economic and social results. With an abundance of land available, rotation of crops was unthought of. The quick exhaustion of the soil by tobacco raising caused immense tracts to be cleared, cultivated for a few years, then abandoned. The value of the older plantations depreciated rapidly, and the repeated migrations to virgin soil had the effect of widely scattering the population. From this fact may be traced many of the peculiarities of the early-day south, socially, economically, and politically.

Livestock Raising.—Livestock was raised in all the colonies, breeding stock often being imported from Europe. As we later shall see, sheep were early imported to secure supplies of wool for domestic spinning and weaving.

Forests and the Lumber Industry.—As the pioneer farmer toilsomely cleared his land, or girdled the trees that they might die and leave the fields unshaded, it was natural that he should think of turning these troublesome forests to some profitable use. First, of course, came the building of his own house, barns, and fences. Then logs, ship timbers, clapboards, and other crudely hewn products were sold in the towns or exported to England. It is recorded that in the very early years of the Jamestown settlement workmen were employed to go into the forest and cut clapboards.

About 1628 a sawmill was in operation in New England; another was set up in Virginia in 1652. Before long the colonies were engaged in a profitable exportation of timbers for ships, masts, planks, shingles, laths, clapboards, and other articles. In 1770, lumber to the value of \$775,000 was exported.

Lesser products of the forests included turpentine, pitch, and ashes.

Shipbuilding.—With lumbering established as a profitable industry, shipbuilding was a natural development, particularly in those colonies where most of the population lived close to the ocean. Within three years after Plymouth was settled, ships were building on the New England coast. On account of the enormous supply of adaptable and easily available timber, as well as the natural genius of the New Englander for everything nautical, American-built ships were cheaper and better than those from European shipyards. The vessels constructed on the New England coast became famous in every port of the world.

Fisheries.—Fishing off the American coast had been an English industry many years before the first English colonies

were founded. The profits of this occupation early appealed to the New Englanders, and it became one of their main sources of livelihood. By 1675, more than 650 American vessels were engaged in cod fishing. Later whaling was developed, and by about 1720 more than 250 ships were engaged in that enterprise. In the later colonial period it was estimated that the New England fishing industry brought in more than \$1,000,000 a year.

The fishing industry had important results beyond the profits it brought to the fishermen. It developed a race of hardy seamen whose skill and daring exceeded those of any other sailors of the world. To these seamen the nation owed much for their services in the Revolution and in the War of 1812.

Less creditable is the record that some New England traders exported the poorest quality of salt fish to the West Indies, where it was traded to the sugar planters to be used as food for negro slaves. In return, the New Englanders received molasses, a by-product of sugar refining, and manufactured it into rum. Some of this rum was shipped to the African coast where it was traded for more slaves for the West India market.

Fur Trading.—Through hunting and trapping and by trading with the Indians, the settlers secured large supplies of furs, in which a profitable export trade was built up. Trappers and fur traders rendered important services by exploring remote sections of the continent.

Manufacturing.—Manufacturing throughout the colonial period was of minor importance. England expected the colonies to supply raw materials for manufactures in the home country, and to furnish a market for manufactured articles; therefore, by restrictive regulations, she discouraged colonial

manufacturing enterprise. It is not likely that the actual injury thus done the colonies was important. We shall note in our further study that even after independence was gained, the growth of manufacturing for many years was slow and hesitant. The fact is that with an abundance of cheap land for farming, and with the market for manufactured articles limited, the American colonist saw scant encouragement for departing from the extractive industries. It was not until the growth of population had expanded the market, and a protective tariff had added a financial incentive, that manufacturing took a place of real importance.

It is likely that the earliest settlers brought spinning wheels and looms from England, and that from the founding of the colonies cloth was woven for clothing. For finer textiles, however, dependence was placed upon England. There is a tradition that a fulling mill was built at Salem in 1640. Certain it is that in 1643 Pastor Ezekiel Rogers and his followers, who had been expelled from England some years earlier, set up a woolen mill at Rowley, Massachusetts. When the English government prohibited the export of wool, Massachusetts encouraged the raising of sheep in order to obtain a home supply. A thriving woolen industry was being built up when, in 1700, Parliament repealed the export duties on English woolen cloth. This made it more profitable to buy from England than to manufacture cloth, and the infant industry declined. A certain amount of "homespun," however, continued to be produced.

In this early colonial woolen industry we may see, in miniature, some of the typical effects of legislative acts in relation to industry. In all ages business has been sensitive to both encouragement and discouragement in the form of public enactments. A survey of industrial development is futile if it overlooks the importance of these influences from the outside.

Along with wool, cotton cloth was manufactured on a

small scale. In the colonial period cotton was not raised extensively, although it had been found growing wild in some of the southern regions. The difficulty of cleaning the seeds from the cotton was considered an almost insurmountable obstacle to its general use.

Iron ore was discovered in Virginia almost as soon as Jamestown was founded, and in 1619 workmen from England erected smelting furnaces on Falling Creek, a branch of the James River. A few years later the Indians massacred the workmen and their families and destroyed the furnaces, thus ending the first American iron enterprise. In Massachusetts iron ore was discovered about 1630, and in 1643 John Winthrop erected a smelting furnace near Lynn. This furnace used the ore known as "bog iron," and turned out seven tons of iron a week.

In our later study we shall have occasion to note, in contrast with this humble beginning, the growth of the iron and steel industry to the impressive proportions of the present time. Today iron ore by shiploads is fed into steel plants covering many square miles of ground, and is fashioned into products ranging from carpet tacks to heavy artillery. Sometimes the metal never cools from the time it is smelted in the blast furnace until after it has been cast, rolled, or fabricated into the finished product.

Copper was discovered near Salem in 1648, but the quantity of ore available was small and there was little demand for the product. The colonial copper industry, therefore, was of even less importance than the manufacture of iron.

These beginnings of manufacture, crude and limited as they were, served to make the Americans less dependent upon Europe, and laid the foundations for the huge industries which in later years became the most imposing features of American economic development.

TOPICS FOR REVIEW AND DISCUSSION

1. What were some of the difficulties encountered by the Jamestown colonists? By the Plymouth colonists? (See encyclopedia or standard work on colonial history.)
2. What was the most important occupation of the colonists? Why?
3. What were some of the most important crops of the northern colonies? Of the southern colonies?
4. Why did the colonists turn their attention to shipbuilding?
5. Why were manufactures of relatively slight importance in the colonies?
6. Describe the earliest attempts at iron smelting.
7. What were some of the differences between farming methods in the northern and in the southern colonies?
8. Why was cotton not raised extensively in the colonial period?

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CHAPTER IV

LABOR IN THE COLONIES; SPREAD OF POPULATION; FINANCE

Need of Labor Force.—To conquer a wilderness, settle a new continent, and develop industries which would supply the needs of a growing population, a labor force was needed. This labor during the colonial period was supplied from several sources.

First and most important was the colonist himself—the free workman who either tilled his own land or hired out his services for wages. As we have seen in the preceding chapter, agriculture was the most important industry, but there also was work to be done by mechanics—carpenters, shipbuilders, blacksmiths, rope makers, and others.

At first some of the colonies experimented with communism—the system under which the worker is not paid wages, but the product of all is divided among the members of the community—but this was unsatisfactory and the wage system was established. The plan which in our own day has brought chaos in the ancient empire of Russia was as far as possible from the ideas of individualism which were strong among the self-reliant Englishmen migrating to the American continent.

Wages in the Colonial Period.—Sometimes the colonies made the mistake of trying to regulate wages by law. In 1633 the Massachusetts Colony passed a regulation under which master workmen in certain specified trades were to receive not over 2 shillings a day if they boarded themselves, or 14 pence if they were boarded by the employer. The town constable

with two associates was authorized to fix the wage rates for less skilled workmen in the same trades. For common labor—not in the skilled trades—the wages of the best workers were fixed at 18 pence a day. This law was altered several times, in efforts to make it work satisfactorily, and in 1636 each town in Massachusetts was authorized to set wage rates for its own workmen. It was some years later that Massachusetts and other northern colonies which had followed her example gave up the attempt to set wage rates by statute.

At the close of the colonial period, wages of farm laborers averaged about 40 cents a day. Carpenters were paid about 52 cents; boat builders, 90 cents; blacksmiths, 70 cents. In that period, it must be remembered, the scale of living was simple and the purchasing power of money generally much greater than it is today. It is likely that even at the low money wage he received the workman was fairly comfortable, according to the standards of the times.

Besides free laborers, there were in the colonies two classes of workmen whose labor was not at their own disposal. These were indentured servants and negro slaves.

Indentured Servants.—In England during the period when the American colonies were growing in population and in prosperity, thousands of people were in abject poverty, often reduced to beggary or pauperism. (See Chapter I, page 16.) Moreover, as we have seen (Chapter II, page 30), the England of that day was contending with a population apparently too large for the available means of subsistence. This condition was particularly pronounced in the years before the Industrial Revolution had enlisted steam and factory machinery as aids to human muscle, thus bringing about an increase of production which ultimately worked to the advantage of the whole community.

Thus it came about that many of the less fortunate workers

in the mother country, when they heard of the opportunities for comfortable living and even for the possession of property in America, were willing to contract to work for a term of years, without wages, for anyone who would pay their passage to the New World. Many immigrants came to the colonies under this early form of "contract labor."

But not all these indentured servants, or "redemptioners," as they were called, emigrated from England of their own will. Vagrants and criminals often were sentenced to transportation and forced servitude in the colonies. As the planters experienced the profits of this system—for the transportation, board, lodging, and clothes they were compelled to supply cost little in comparison with the value of the labor of an able-bodied white workman—they called for more and more redemptioners. Unscrupulous agents in England sometimes kidnaped children, and even adults, and shipped them off to America.

In time the period of service and the rights of the redemptioner came to be defined by law. Generally the indentured person, unless he was a criminal under long sentence, was given his freedom when about twenty-four years old. Many of the indentured servants were skilled artisans or cultivators, and upon gaining their freedom amassed property and became respected members of the community. They were of the same race as the rest of the population, their former condition of temporary servitude left no serious stigma, and therefore they were assimilated with an ease which is strikingly lacking in the case of some of our present-day immigrants.

The system of indenture, while it was marred by some abuses, was in many respects a useful institution. It supplied cheap and abundant labor at a time when that was one of the greatest needs of the colonists, and it also enabled thousands of ambitious and energetic Englishmen to reach America when otherwise they could not have secured passage.

The Beginning of Negro Slavery in the Colonies.—Quite different from the system of indenture was the institution of negro slavery. The enslaving of the more backward races at that period was common. No especial ethical principle was thought to be involved. In the colonies planted by European nations in South and Central America and the West Indies, as well as in other parts of the world, much of the work was done by slaves. The machinery which in later years did the work of mankind more cheaply than it was done by this lowest form of human labor had not yet been devised. When this machinery came into general use, slavery was found to be an uneconomical institution, except perhaps in certain sections, as in the southern part of the United States, where particular social and agricultural conditions gave it at least a semblance of economic justification.

The first slaves were introduced in Virginia in 1619. Of this event, which was to have far-reaching consequences in the history of Virginia, of the other colonies, and of the nation they were to found, John Rolfe, one of the settlers wrote: "About the last of August came in a Dutch man of warre that sold us twenty Negars."

During the period before the Revolution slavery spread moderately through the colonies, mostly in the central and southern regions. Slave labor came to be looked upon as profitable—some thought it indispensable—in the tobacco fields of Virginia and Maryland and on the rice plantations of the Carolinas. New England had few slaves, probably in large part because they could not be made profitable in a cold climate.

The problems which later grew out of the institution of slavery, which influenced much of the political and social development of the nation and finally led to the Civil War, and which even today have not all been solved, do not belong to a study of the colonial period. To these problems we shall have occasion to give attention in later chapters.

The Growth and Spread of Population.—There is danger that the student will allow himself to receive the impression that the colonies were founded, grew up, and gained their independence, all in a brief period of time. Quite the contrary is true. From the founding of Jamestown in 1607 to the opening of the Revolution in 1775, a considerably longer time elapsed than the period between 1775 and the close of the World War. When we contemplate the changes that have taken place in the latter period, we may naturally expect that the colonial era was not without important developments.

Among the most notable of these developments was the growth and spread of population. From a few hundreds of half-starved settlers, clinging to the coast line in widely scattered hamlets, the inhabitants of the New World increased to a considerable population. According to the best records available, there were in all the English settlements in 1700 about 300,000 people, distributed as follows: New England, 115,000; New York, 30,000; New Jersey, 15,000; Pennsylvania and Delaware, 20,000; Maryland, 35,000; Virginia, 70,000; the far south, 15,000.

By 1755 the population of the thirteen colonies considerably exceeded 1,000,000. Of this population, New England had 425,000; the middle colonies, 457,000; the south, 283,000. Of the total population at that period, there were more than 260,000 negroes, African slaves or their descendants. Cities of considerable size had grown up. The largest were Boston and Philadelphia, each with about 25,000 inhabitants. New York was a town of from 15,000 to 18,000.

With the increase of population, the diversification of industries, and the lessening danger from the Indians, the settlers gradually pushed farther into the interior of the continent. Up to the time of the Revolution, however, the bulk of the population still was close to the Atlantic coast. The era of

extensive migration to the valleys of the Ohio and the Mississippi was to come after independence had been won.

How the Colonies Supplied the Need of Money.—Early in the period of settlement the need of a circulating medium—some form of money—became pressing. Little coined money was brought from Europe, and most of what was brought found its way speedily back to the Old World in payment for goods purchased by the colonists. In the absence of a sufficient supply of coin, resort was had to various devices. Corn and tobacco passed as currency, and at times their exchange value was regulated by law. The wampum, or shell beads, of the Indians served as money among the northern settlers. Much business was transacted by barter, or the exchange of one article for another. In fact, the farmers of the northern and middle colonies subsisted mainly from the produce of their own fields, and by trading with their neighbors and with the mechanics and shopkeepers in the towns. Many a colonial farmer probably lived his life through without ever having more than a few shillings of money in his possession at once—perhaps a few pounds in a lifetime.

In the later colonial era, the need of currency led to the temptation to issue paper unsecured by actual values. One by one the colonies yielded to this temptation. In 1690 Massachusetts found herself hard pressed for means of paying her soldiers who had returned from an unsuccessful campaign against the French stronghold of Louisburg. Her legislators issued bills of credit—or promissory notes of the colonial government—in the sum of 40,000 pounds. These bills bore no interest, and had no fixed time for redemption. They were backed by no security except the promise of the colony to redeem them at some indefinite time in the future. Nevertheless their value was kept up by the fact that the colonial govern-

ment accepted them in payment of taxes. In 1711 Massachusetts issued another 40,000 pounds in notes. Other colonies followed the evil example, and soon the country was flooded with paper money in various stages of depreciation.¹

Massachusetts finally redeemed her bills, but some of the other colonies defaulted in payment and their money never was redeemed. The bad effects of the issuance of unsecured paper money were to be experienced several times during the course of the history of the United States.

TOPICS FOR REVIEW AND DISCUSSION

1. What were the sources of labor supply in the colonies?
2. What were some of the benefits and some of the disadvantages of the importation of indentured servants?
3. What were some of the wages paid to workmen in the colonial period? What is your understanding as to the value of these wages in comparison with the workman's living expenses?
4. Describe the growth and distribution of population in the colonies before the Revolution.
5. What were some of the forms of currency used in the colonies?
6. What was the reason coined money was scarce?
7. Describe the issuance of paper money by the colonial governments.

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¹ By "depreciation," when the term is used in speaking of money, we mean the reduction of its purchasing value below its face, or official, value. Thus we speak of the depreciation of the German mark, in the early months of 1923, to a small fraction of its former purchasing power. Unsecured paper money has at times depreciated to the vanishing point—that is, it has disappeared from circulation altogether because nobody would accept it in payment for commodities or services. This, as we shall see was the ultimate fate of a large part of the Continental currency issued during the Revolution, and of the Confederate currency during the Civil War. A more detailed discussion of currency may wisely be deferred until later chapters. The subject is of supreme importance in connection with economic history.

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CHAPTER V

THE STRUGGLE FOR INDEPENDENCE

Economic and Political Freedom.—To the thoughtful student of American industrial development, the period of the Revolution offers unusual opportunity for observing national tendencies in their formative stage. Throughout the colonial era, economic independence and political freedom had gone hand in hand. Many of the colonists had emigrated from the Old World to escape the repressive restrictions of stupid governments; others acquired ideas of self-reliance and personal freedom through the hard experiences of overcoming the wilderness and defending themselves against the savages.

These ideas were strengthened by the fact that for long periods the colonies were left practically to shift for themselves. Their economic dependence upon the mother country, except as a source for the importation of manufactured articles, gradually waned. By the middle of the eighteenth century a generation had arisen which never had learned to lean heavily upon England for material support. The ideal of political independence as yet was mainly undeveloped. A large measure of industrial freedom, however, had long been enjoyed, and instant irritation flamed up when efforts were made by the English government to take away this freedom.

Among the causes of the Revolution, those having an economic basis held an important place. It is true that the quarrels over commerce and taxation ultimately were merged in a burning resentment against British dominion, which took the form of political and military action. The idea of industrial freedom, however, remained prominent, and in all later history

it has been one of the fundamental concepts of the American nation.

Even in the mutual suspicion and lack of unity which cause the student of history to lose patience with his Revolutionary ancestors, we may see a perverted manifestation of that individualism which, when it is rightly directed, has been one of the strongest elements in the building of American industry.

Likewise, we may trace an intimate connection between the ideas of political democracy which were both a cause and a result of the War for Independence, and that democracy in industry which, sometimes obscured, has never wholly disappeared from the nation's business life.

With these observations in mind, let us review briefly the leading events connected with the Revolution.

The Mercantile Theory.—In the seventeenth and eighteenth centuries European nations fashioned their commercial policies largely in accord with what was then known as the "mercantile theory." This policy, which was at once political and economic, aimed at the building up of a strong national power, largely through advantages in commerce and shipping. Regulations relating to industry and trade were framed with a view to securing the greatest possible advantages for home manufacturers and shipowners. It was expected that this would create a mass of domestic wealth which could be taxed for the benefit of the government, and at the same time encourage the building of ships which could be used as war vessels in time of need.

Now, the nations of Europe enforced this mercantile theory in their dealings, not only with foreign powers, but with their own colonies as well. We have seen in earlier chapters that the English government sought to maintain the American colonies as a source of raw materials and a market for manu-

factured goods, with little regard as to whether this would work benefit or injury to the colonists.

Navigation Acts and Their Effect upon Colonial Trade.—

Beginning in 1645, Parliament enacted a series of Navigation Acts, the purpose of which was to restrict the commerce of the colonies to goods carried in English ships. A typical statute of this series was the Navigation Act of 1660, which limited the exports of the colonies to ships owned by Englishmen, and of which the masters and three-fourths of the crews were English. Naturally, for the purposes of this law, American colonists were looked upon as Englishmen. The act further prescribed a long list of colonial products which could be exported only to England and her possessions. The navigation laws were made more stringent steadily until 1696.

During this period, however, the English colonists fared well, judged by the standards of the times. The laws by which the mother country curtailed their prosperity and limited their trade were less severe than those by which most other European nations sought to shackle their overseas citizens. The Navigation Acts, moreover, during a great part of the time that they were in existence, were worse in theory than in effect, from the fact that they were evaded systematically by colonial traders. A large portion of the export business of the colonies was carried on contrary to the law, sometimes with the connivance of British officials. In fact, the growth and prosperity of the colonies up to the year 1763 was aided greatly by the circumstance that the British government usually was too busy with other matters to give them much attention.

English Conquest of French Territories.—In 1763 the Peace of Paris terminated the French and Indian War (the American side of the Seven Years' War in Europe). This war left Britain mistress of the former French possessions in

the New World.¹ It also left her with a national debt swollen to 140,000,000 pounds, a staggering sum for that day, half of which had been incurred in waging the war.

In casting about for means by which this debt might be paid, the British statesmen bethought themselves of the American colonies, for whose benefit, they argued, the debt in large measure had been incurred in fighting the French. What was more natural, they said to each other, than that the colonists should be expected to bear their share of the burden; therefore, why not see to it that the former restrictive laws be enforced, and pass new ones which would raise more revenue for the benefit of the debt-burdened mother country? In this design the British lawmakers had the hearty approval of the new king, George III, lately come to the throne with inflated ideas about royal authority.

Parliament Adopts New Policy of Taxation.—Parliament therefore proceeded to enact a series of new laws, with the purpose of raising funds by colonial taxation. In 1764 the Sugar Act laid import duties upon coffee, wines, silks, indigo, and other goods; the duty upon sugar brought into the colonies was increased, and that upon molasses, while actually lowered, was strictly enforced.

In 1765 came the Stamp Act, by which Parliament attempted to force the colonists to use, and pay for, stamped paper for all legal documents. The Stamp Act aroused widespread opposition. Not only was it an irritating financial burden, but it was looked upon as internal taxation, as distinguished from customs duties, and American leaders began to advance the theory that, as the colonies were not represented

¹ Besides the Canadian colonies, the French territory taken by England included that part of Louisiana east of the Mississippi. The portion west of the Mississippi, as well as the city of New Orleans, had been ceded secretly to Spain the year before the Peace of Paris.

in Parliament, that body had no right to levy taxes within their borders.

Parliament for a time yielded to the opposition from America, and repealed the Stamp Act. It followed this action, however, by passing what were known as the Townshend Acts, levying new import duties upon numerous articles brought into the colonies. After two years these duties were repealed, with the exception of a small tax on tea, which was retained to uphold the principle that Parliament could levy taxes upon the colonies as it pleased.

The War for Independence.—In the meantime, through non-importation agreements and in other ways, the colonists had resisted the obnoxious regulations as best they could, without, however, reaching the point of open breach with the mother country. The quarrel in its early stages was mainly economic, and it was not until after several of the government's provocative measures had been adopted one after another that the colonists began to think of open resistance to British authority. After the enactment of the tax on tea, however, and the famous Boston Tea Party which it provoked, events drifted rapidly toward rebellion, and then toward independence. The war which began at Lexington in 1775 ended in 1783, with the signing of a treaty by which England recognized the independence of the nation formed of her former colonies.

Before turning to the history of the young nation in the early and difficult years of its career, and the means by which it solved its financial and industrial problems and laid the foundations for future commercial supremacy, let us look briefly at the methods by which thirteen weak states, without stable government and divided often by mutual suspicions and jealousies, were able to sustain themselves through an eight-year war with the most powerful nation of the world.

Continental Congress Grapples with Financial Problems.

—At the beginning, and to a large extent throughout the war, the colonies were lacking in nearly everything needful for carrying on the contest. We have seen in previous chapters that they were insufficiently supplied with money, even for times of peace, and that they had not built up industries which would make them economically self-sufficient. Arms, supplies, and money were pressing necessities from the hour the first shot was fired. The Continental Congress—a body representing the individual states and without power to enforce its decrees upon any colony which chose to disregard them—struggled by various means to meet these needs. Money was raised by loans from patriotic Americans and from foreign governments and citizens, particularly from France, which finally made common cause with the colonists against England. This revenue, however, was far from sufficient.

Taxes always had been unpopular in America. The Continental Congress had little inclination, and less power, to pay for the war by this means. "Do you think," one delegate in Congress is reported to have said, "that I will consent to load my constituents with taxes, when we can send to our printer and get a wagon load of money, one quire of which will pay for the whole?"

America Flooded with Paper Currency.—Unfortunately, Congress was only too ready to agree with this delegate. It did, indeed, send to the printer and order huge sums of so-called money. But it was soon to learn that currency, unsecured by reserves of gold, silver, or other things of tangible value, and unsupported by sound credit, comes to be worth little more than the paper upon which it is printed.

In June, 1775, the first issue of "bills of credit," or paper currency, was ordered, in the sum of \$2,000,000, based upon the credit of the states and to be redeemed in silver after 1779.

But by that year the country was flooded with Continental paper money. The total on November 29, 1779, was more than \$241,000,000, and a paper dollar was worth only 2 or 3 cents in specie—that is, in coin.

It must be remembered that paper money, unlike minted gold or silver, does not depend for its value upon its worth as a commodity. In final analysis, it is somebody's promise to pay the sum which is printed upon its face. Its value, therefore, varies with the probability of its redemption, presently or in the future. If it is not secured by specific reserves of gold, silver, or other articles of tangible value, its chance of redemption rests upon the credit of the issuing government, bank, or individual. If this credit is of doubtful character, the money depreciates.

Even if paper money is based upon sound credit, moreover, it is, like other objects of value—even like gold and silver coin—subject to the laws of supply and demand. If the sum in circulation largely exceeds the amount required as a medium of exchange—and this amount, as we shall see in our later studies of currency and coinage, is difficult to estimate and is subject to frequent fluctuations—there occurs a depreciation in the value of money, which usually is manifested in an increase in prices of commodities. Thus, money which is absolutely sound may lose in purchasing power if it is issued in quantities too great for the needs of the public.

The Continental currency suffered in both these respects. The credit of the individual states was bad; that of the central government was little if any better. Notes were issued far beyond the needs of any volume of business which possibly could be carried on. Money, so-called, became a drug on the market. Not only did the central government issue clouds of paper, but the states printed notes on their own account, adding to the volume of currency in circulation and detracting from its value. In 1780 Congress enacted that paper currency

should be received on a basis of 40 to 1, as compared with silver, thus giving official recognition to its depreciation. By 1781 Continental paper practically had ceased to circulate. Its value had reached the vanishing point.

Inflation versus Taxation.—By some, the issuance of paper money during the Revolution has been defended, economically, on the grounds that, by forcing all the citizens to suffer the loss incident to its depreciation, it acted in fact as a universal tax for the expense of the war. In a measure this is true. The economist, however, well may agree with the historian in the statement that a tax levied honestly and openly, if it could have been collected at all, would have attained the same end with far less of suffering, of confusion, and of danger.

TOPICS FOR REVIEW AND DISCUSSION

1. What was the mercantile theory?
2. What were some of the commercial restrictions enacted at the expense of the colonies?
3. What were the means adopted by the colonies to finance the Revolution?
4. Why did the Continental currency decrease in value? What finally became of most of it?
5. What was the significance of the action of Congress in fixing a ratio of 40 to 1 as the value of paper currency in terms of coin?
6. Study in an encyclopedia or other reference work the life of Robert Morris; report on his services in financing the Revolution.

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Part II—The Nation in Its Formative Period

CHAPTER VI

EARLY DAYS OF THE REPUBLIC AND THE STRUGGLE AGAINST COMMERCIAL AGGRESSION

Features of American Industry.—In beginning our study of national economic development, it will be prudent to halt our narrative long enough to note some of the fundamental tendencies which may be traced down to the present day. History, whether economic or political, is of value in proportion to our ability to understand its philosophy and interpret its events in the light of their causes and their effects. The commercial genius of the American people has not changed in its fundamental characteristics, however much those characteristics may have been modified by changing conditions.

What, then, are the basic facts of the development of American industry?

1. Americans have been a people committed to expansion. Restless pioneers have not been content until they have penetrated the most remote corners of the national domain and pushed back the national frontiers. The grandsons of the Ohio settlers pushed into the Rocky Mountains and laid hold on the Pacific coast; their great-grandsons established themselves in the islands of the Pacific and amid the snows of Alaska. In business, likewise, the American idea of progress has had much to do with size. "Big Business," whether on the scale of 1870 or the scale of 1923, has been in the forefront of progress.

2. With territorial expansion there went, of necessity, the development of means of transportation. Much of the commercial progress of the country has been made possible by adequate facilities for carrying goods and passengers between distant points. The story of the American railroad is one of the romances of economic history. Likewise, the problems connected with transportation have been among the most difficult with which the American people have had to grapple.

3. American industry has been developed largely through the devising and adoption of machines. From the beginning of the national period, "Yankee ingenuity" was proverbial. This ingenuity, combined with the daring and imagination of capitalists and business men, made it possible to utilize machinery to an extent unknown in most other countries.

4. The American character is in the main individualistic. It has sympathy and admiration for the man who launches an enterprise and by force of his own personality pushes it to a success. This individualistic attitude is illustrated in the huge fortunes attained by many pioneers in business. The opportunity for almost limitless profits has furnished the incentive for much of the economic development of the country.

5. Not only have men been permitted to win profits almost without limit, but history tells that the public and the government have been indulgent to those who have boldly sought special privileges. Especially in the earlier periods, monopolies and land grants were dispensed with prodigal lavishness. However, the tendency has been toward less, rather than more, special privileges with the passing of the years.

6. Democratic ideas in government have been carried over into industry—or, to state it more accurately, the democracy of industry and that of government have reacted upon each other. The line of progress from workman to manager and owner has been kept open, and many there have been who have made the ascent.

7. Partly as a result of the democratic ideals of business, there have developed no rigidly defined "classes" in American life. The lack of a permanent "working class" has had much to do with the relatively slow growth of trades unionism in the United States.

8. There has been a gradual elevating of the standards of business morality. Practices which were but mildly disapproved in the middle of the nineteenth century would make their perpetrator a business outcast if they were attempted today.

9. The public always has taken an active interest in commercial affairs, and public opinion, sometimes crystallized into laws, has been powerful in its influence upon business development. In more recent years there has been a steady increase in the extent of governmental regulation of industry.

Extent of the New Country.—The treaty by which England recognized the independence of her former colonial possessions released for unhampered development a country of vast extent and well-nigh limitless resources. The boundaries of the new nation—with some minor uncertainties which were left to be adjusted—included the territory from the Atlantic to the Mississippi and from the Great Lakes to the 31st parallel and to the southern border of Georgia. With the exception of Florida, this territory was practically identical with continental United States of the present day, east of the Mississippi.

The country, as we have seen, was populated mainly along its eastern border. Huge tracts in the interior still were pathless wilderness. The conquest of this wilderness for civilization already had begun, and soon was to become one of the notable features of national development.

The United States already was known as a rich reservoir of raw materials and foodstuffs. Its agricultural possibilities, while as yet far from fully developed, were sufficient to supply

the growing population and leave a surplus for export. What was not yet known was that the nation held within itself materials for practically every need of manufactures and trade; that its future stores of coal and iron and copper and gold and silver; its lumber, its livestock, and its other sources of wealth were to make it a leader in industry and commerce in the busy years of the century which was about to open.

The Land Claims of the States.—The very extent of the domain included within the original thirteen states was the occasion for one of the most troublesome problems at first confronting the new government. The land claims of the English colonies had been broad, sometimes vaguely defined, and some of them were conflicting. Some of the colonies had held apparently good title to stretches of territory extending clear through to the Mississippi. These land claims were brought into the new union by the separate states, and the question of how to administer the unsettled land of the west immediately pressed for a solution. Under state control, there was imminent danger of disputed jurisdiction, of boundary controversies, and of confusion in administration.

As early as 1780, while the war for independence still was in progress, the Continental Congress had taken the first step in the settlement of this problem by adopting a resolution providing that the public lands included in the claims of the different states "shall be disposed of for the common benefit of the United States, and be settled and formed into distinct republican states, which shall become members of the federal union, and have the same rights of sovereignty, freedom and independence as the other states."

Lands Ceded to the United States Government.—At first some of the states hesitated to turn over their lands to the central government, but all shortly made the necessary cessions.

Thus the United States found itself in possession of vast tracts of public lands—lands from which in the future some of the most populous and wealthy states were to be carved out. The policy to be adopted in securing the settlement of these western lands, and in putting the soil into possession of deserving cultivators, was for many years one of the most weighty subjects before the federal government. We shall observe, in studying the spread of population and the gradual conquest of the western wilderness, how this policy, frequently altered, influenced the economic development of the country. For the present we shall glance only at the first important act in this connection—the opening of the Northwest Territory.

In 1787 an act was passed by Congress, opening for settlement the district between the Great Lakes and the Mississippi and Ohio rivers—the territory from which later were created the states of Ohio, Indiana, Illinois, Michigan, and Wisconsin. This Ordinance of 1787, as it is known in history, included memorable guaranties of human rights, the security of property, and religious freedom. Particularly, it prescribed that slavery never should be permitted in the territory.

Population of the United States.—As provided by the Constitution ratified in 1788, the first United States census was taken in 1790. This enumeration showed a population of 3,929,214. The negro population was 757,200, or almost one-fifth of the whole. This is the largest percentage of negro population ever reported in a federal census. The greatest density of population was, as in colonial times, along the Atlantic coast. Virginia was the most populous state, counting 747,610. Pennsylvania had 434,373; North Carolina, 393,751; Massachusetts, 378,787; New York, 340,120. Of the entire population, only 3.3 per cent lived in cities or towns of 8,000 or more inhabitants—showing that agriculture was still the

occupation of the vast majority of the people. It is probable, in fact, that in 1790 about 95 per cent of the population lived by farming. Manufacturing still was of relatively small importance. Residents of the cities and towns were occupied mainly with commerce and mercantile pursuits.

Beginning of Struggles against Commercial Restrictions.

—Although Great Britain had recognized the independence of the United States, she was anxious to retain the American commonwealth, as before, for a storehouse of raw materials and a market for manufactured products. No sooner had peace been signed than merchants from England were seeking American orders, willing to sell even at a loss if by that means they could recover their former profitable markets. As a result, many small manufacturing enterprises which had started after the war had shut off imports, and which had done good service to the government and to the public during the Revolution, were unable to meet foreign competition and were forced to the wall. In 1784 imports from England were valued at 3,679,000 pounds, whereas before the opening of the war for independence the yearly average had been about 1,763,000 pounds.

In the meantime, until the adoption of the Constitution there was the greatest confusion in American commercial regulations. The Articles of Confederation, by which the thirteen states were loosely bound together during the war for independence and the earliest years of freedom, permitted each state to legislate on these matters for itself. As a result, states were found discriminating against each others' products and engaging in tariff wars among themselves. The Constitution, by prohibiting interstate tariffs and placing control of commerce in the hands of the federal government, put an end to this confusion.

Britain Seeks to Discourage American Commerce.—There was still, however, a serious difficulty growing out of the commercial regulations of foreign nations, particularly those of Great Britain. Soon after peace was concluded, Parliament excluded American vessels from the British West India trade, which had been one of the main sources of profit to the New England merchants. Other regulations, designed to injure the commerce of the new republic, followed.

As soon as Congress, under the Constitution, was free to deal with commercial matters without danger of interference from the states, it sought to retaliate for the British restrictions and at the same time to encourage American trade and shipping. By an act of 1789, a tariff rebate of 10 per cent was allowed on all goods imported in American ships. Tea brought directly from the Orient in American vessels was required to pay only about half the duty imposed when it came by way of England. In the same year further aid was given to American shipping by the enactment of a law laying tonnage dues on foreign vessels amounting to 50 cents a ton, while ships built in America and owned by Americans paid only 6 cents.

Napoleon's Wars and Their Effect upon America.—What would have been the outcome of this contest in commercial restrictions we are unable to know. It was not to be allowed to run its course, for shortly it was interrupted by a series of events on the other side of the Atlantic, which had far-reaching effects for many years, not in Europe only but in the United States as well.

Almost at the same time that the Constitution was adopted by the thirteen states, the French Revolution overthrew the monarchy which had aided the colonies in securing their liberty. England and most of continental Europe promptly declared war on the French Republic. After several years of

disorder, at times verging on anarchy, the French government was stabilized by Napoleon Bonaparte, who, as the Emperor Napoleon, ruled the nation, and at times practically all continental Europe, until his downfall in 1815. For almost twenty-five years the world was shaken by mighty conflicts among the European powers.

At first this period of disorder was beneficial to the commerce of the newly founded American republic. As the only considerable neutral nation, the United States found itself able to secure a large part of the carrying trade of the world, as well as steady markets for the foodstuffs needed to feed the armies which were devastating the grain fields of Europe. The foreign commerce of the United States mounted from \$48,000,000 in 1791 to \$205,000,000 in 1801. In the same period, exports increased from \$19,000,000 to \$94,000,000. Prices of exportable articles advanced, land for farming came into unprecedented demand, and the need for more vessels caused a sudden stimulus to the shipbuilding industry. For the moment it seemed that the disasters of Europe would prove unmixed blessings to the merchants, the farmers and the ship-owners of America.

Warring Nations Strike at Neutral Trade.—It soon was learned, however, that these blessings were combined with serious disadvantages. Napoleon and the British government found means of injuring each other, by mutual attempts to shut off shipments of supplies, and at the same time to strike effective blows at the growing commerce of the United States, which was favored by neither.

In August, 1804, England, then at war with France, by decrees which were known as "Orders in Council" declared a blockade of all French ports from Ostend to the Seine. In May, 1806, this blockade was extended to include all the coast between the Elbe River and the city of Brest. Through this

blockade, England claimed the right, under international law, of capturing neutral vessels which attempted to trade at the forbidden ports.

Napoleon's reply came promptly. In what was called the "Berlin Decree," in November, 1806, he declared a blockade of the British Isles, and prohibited any ship entering a French port if previously it had visited a port of Britain. Napoleon at that time was virtually master of continental Europe. He had only a weak navy, however, and laid no claim to rivalry with England for supremacy on the ocean. His decree, therefore, established what is known as a "paper blockade," that is, one that is not enforced by an adequate naval guard. Nevertheless, Napoleon's blockade of England was a further hindrance to neutral traders. What was worse, from the American standpoint, was that it provided England with an occasion for laying yet heavier restrictions upon neutral commerce. Orders in Council in 1807 declared a blockade of all ports belonging to France, her colonies, and her allies, and forbade neutral vessels to enter such ports until they first had visited England and paid re-export duties on their commerce. Napoleon, not to be outdone in aggression, issued the Milan Decree, declaring that any vessel which heeded the British Orders in Council was liable to seizure.

Jefferson Tries to Maintain Neutrality.—It was plain that no neutral nation, however peace-loving and conciliatory, could engage in European commerce and at the same time steer clear of violating either the British Orders in Council or Napoleon's decrees. As the only neutral country which was doing an important export or carrying trade was the United States, the situation of the republic became critical.

In the meantime, George Washington and John Adams had served as Presidents of the United States. The Federalist party, under which the Constitution had been adopted, had

passed from power, and had been succeeded by the Republican party, which represented what at that time were considered extreme democratic ideas. The President was Thomas Jefferson, an avowed disbeliever in preparations for war.¹ Under the leadership of Jefferson, Congress passed a Non-Intercourse Act, effective December, 1807, under which trade with both England and France was forbidden. This was followed by a law which has become historic as the Embargo Act. This law, passed soon after the Non-Intercourse Act went into effect, prohibited the departure of American vessels for foreign ports, and required shipowners engaged in the coasting trade to give heavy bond guaranteeing that they would not send their vessels across the Atlantic.

The effect of the Embargo Act was instant and startling. Probably it caused some inconvenience to England and France; to America, however, it wrought enormous damage. Ships rotted at their wharves, sailors were idle, everyone who had been interested in the export trade, from farmer to shipper, faced ruin. It was estimated that for a whole year 100,000 men, a large number for that period, were unemployed. The clamor against the Embargo Act became so insistent that it was repealed after fourteen months and a fresh act for non-intercourse with England and France was passed in 1809.

The War of 1812.—Until 1812 the American government tried by peaceful means to avoid the aggressions of France and England. In that year war was declared against Great Britain.² This was the War of 1812, which terminated in 1815,

¹ The Republican party of Jefferson should not be confused with the present party of the same name, which held its first national convention in 1856.

² In principle, the blockade decrees of Napoleon were as much an invasion of American rights as were those of England, and, in fact, it was for a long time uncertain against which, if either, of the belligerents the United States would declare war. England, however, in addition to imposing blockades, engaged in other unfriendly practices, the most annoying of which was her assumption of the privilege of searching American vessels and taking off sailors who were claimed as British subjects. The story of the War of 1812 is an interesting and important chapter in American history, but is outside the purposes of this book.

and which, more than any other conflict in which the United States has been engaged, was fought over commercial issues.

The War of 1812 was in effect a drawn contest, and the treaty of peace settled practically none of the issues over which the two nations had drawn the sword. However, the cessation of the Napoleonic Wars ended the occasion for blockades, and the seas were again open to American commerce. Furthermore, the creditable exploits of the American navy won the respect even of England, and from that time attempts to hold the republic in commercial subjection ceased. It is largely for this reason that the war of 1812 often is called the "second war for independence."

TOPICS FOR REVIEW AND DISCUSSION

1. How were the western lands secured for the central government, and what were some of the advantages of this action?
2. Why did so small a percentage of the population in 1790 live in cities and towns?
3. What was the effect of the conclusion of peace with England in 1783 upon manufactures in the United States?
4. What were the English and French blockades during the Napoleonic Wars, and what was their effect upon American commerce?
5. What was the Non-Intercourse Act? The Embargo Act? What was the effect of the Embargo Act upon American commerce and trade?
6. What were some of the economic results of the War of 1812?
7. Study in an encyclopedia or other reference work the life of Thomas Jefferson; report upon his political and economic beliefs.

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CHAPTER VII

THE BEGINNINGS OF MANUFACTURING IN THE UNITED STATES

Growth of Manufactures.—The United States began its existence as a nation pre-eminently agricultural. This condition lasted with little change until perhaps a quarter of the nineteenth century had passed. Then began a growth of manufactures which within a few generations placed America at the head of the industrial nations of the world. By far the greater part of this change came in the years between the beginning of the Civil War and the end of the World War in 1918. In that period the growth of American manufactures and of the other enterprises to which they are related was on a scale to which the economic history of the world presents no parallel.

We shall not here consider the events of that later period, nor even those of the busy years in the middle of the nineteenth century. Both may well be reserved for later chapters. At present we shall content ourselves with the modest industrial beginnings, up to about the year 1820.

Causes of Early Industrial Changes.—The growth of factories in the United States was in part a wholly natural development. The nation possessed ample markets and, for some products, seemingly exhaustless supplies of raw materials. To put the raw materials into finished form and offer them for sale to the ready buyers was a perfectly normal expression of business enterprise. We have noted the manner in which, even in colonial times, the manufacture of articles of common necessity was conducted on a small scale. Perhaps the most

noteworthy and typical example of this adjustment of raw materials to a domestic market is to be found in the textile industry, one of the first developed and to this day one of the most important.

But manufacturing industry was subjected to outside influences, sometimes helpful, sometimes injurious. The need for munitions in the Revolutionary War gave an impetus to the slowly developing iron industry. On the other hand the flooding of American markets with foreign goods, at the close of the war, demolished much of the industrial structure which had been built up during the war years of forced isolation. In the preceding chapter we noted some of the effects of outside influences during the troubled times which ended with the downfall of Napoleon.

One of the powerful incentives to industry, as we shall see, has been the protective tariff, which in varying degree has placed American manufacturers in positions of economic advantage in comparison with their foreign competitors.

The future pre-eminence of the United States as a manufacturing country was anticipated by few, if any, of the men who helped in founding the new nation. The broad territory, the rich soil, and the abundant forests of the country seemed to fit it admirably for the production of food and raw materials. Europe offered a ready source of manufactured articles. For many years, in fact, there was bitter contention between the friends of the growing manufactures and the men who believed that the country should adhere to what they believed to be its manifestly proper policy of trading with Europe for the bulk of its manufactured goods.

England Tries to Retain Secrets of Factory Machinery.—

The Industrial Revolution, by which the factory system was fully established in England by about the year 1800 (see Chapter I, page 18), was not at once effective in the United States

We have seen that the natural advantages for agriculture, combined with British restrictions upon manufacturing, held America for many years in the position of a producer of raw materials. After the Industrial Revolution England guarded jealously the secrets of the machinery for spinning and weaving which had made possible the factory system. As early as 1774 Parliament passed a law prohibiting the exportation from the kingdom of any tools or machinery used in cloth manufacture, or any plans or drawings of these machines. Violation of the law was made punishable by a fine of 200 pounds. In later years this statute was made more rigid by adding to the list of articles which were not to be exported, and by increasing the severity of the penalty. It was made a crime to induce English factory workers to leave the country, and efforts were made to prevent the emigration of men who were suspected of having knowledge of the construction of factory machinery.

These regulations for some time were effective in preventing any general adoption in America of the new factory system. It was impossible, however, permanently to keep the closely guarded secrets. As early as 1775 Christopher Tully set up a spinning machine in Philadelphia. A cotton factory was operated at Beverly, Massachusetts, in 1787. What is considered to have been the first complete set of spinning and weaving machinery was constructed at Pawtucket, Rhode Island, in 1789 by Samuel Slater, who, unable to carry away plans on account of the vigilance of the English laws, had retained in his memory the intricate details of the machinery. With the secrets of the English factories once revealed, Americans were not slow to apply their inventive talents in improvements, but for many years the United States lagged behind England in the use of mechanical processes. It was not until about 1812 that manufacturing became an important occupation, and, in fact, some authorities maintain that the Industrial Revolution

was not complete in the United States until after the Civil War. This statement is correct, if we understand it to mean that not until then were manufactures developed upon a really impressive scale, and with modern methods.

Textile Manufactures.—Like England, the United States made the greatest early use of factory machinery in the textile industries. By this is meant the spinning of cotton, wool, linen, and silk, and the manufacture of cloth and other woven products. For this industry, and particularly for cotton manufacture, the United States was peculiarly adapted by reason of abundant raw materials and of facilities for power. It was particularly the machinery for this group of manufactures which, as we have seen, England sought to monopolize. One of the greatest of all inventions related to the textile industry, however, was made by an American. In 1794 Eli Whitney of Massachusetts devised the cotton gin, a machine for separating the seeds from the cotton fiber. This work previously had been done by hand, or with crude tools, and was so laborious that it had presented a seemingly insuperable obstacle to the development of the cotton industry upon a large scale.

We shall have occasion in later chapters to observe the effect of this invention upon agricultural, social, political, and labor conditions in the United States. We shall here consider only its effect upon the textile manufacturing industry. In 1803 there were 4 cotton factories in the United States. By 1808 the number had increased to 15, with 8,000 spindles. In 1811 there were 80,000 spindles, and in 1815 there were 500,000. Another indication of the swift expansion of the industry is furnished by the records of the use of raw cotton by domestic manufacturers. This, in 1800 amounted to 500 bales; in 1805, to 1,000 bales; in 1810, to 10,000 bales, and in 1815, to 90,000 bales. Naturally, this growth was not due

wholly to the invention of the cotton gin. Increasing encouragement to American manufactures, and the partial or complete interruption of commerce with Great Britain during the period culminating in the War of 1812, were important factors. In 1814 Francis C. Lowell introduced the power loom in his factory at Waltham, Massachusetts. This gave another powerful impetus to the industry by cheapening the manufacturing process.

While cotton spinning and weaving led the textile industries—and, in fact, all manufactures—the woolen industry was being gradually built up. This industry, however, was hampered by lack of domestic raw material and by scanty tariff protection, under which American manufacturers found it difficult to compete with cheap and abundant imports from Europe. The best records available indicate that in 1815 woolen goods valued at \$19,000,000 were produced by about 50,000 workmen.

The Iron Industry.—Iron and steel manufacture, on a large scale, is an industrial giant of comparatively recent growth. Like the coal industry, to which now it is closely related, its development was delayed until the needs of an advancing civilization made its products indispensable. We find that in England iron ore was first smelted—that is, heated until the metallic iron was separated from the other ingredients—by the use of wood for fuel. This was thought to threaten the existence of the forests,¹ and in 1581 laws were enacted prohibiting the operation of iron furnaces in certain parts of the kingdom. Early in the seventeenth century the use of coal in smelting iron was begun, and in the eighteenth century the blast furnace was invented. The first blast furnaces in England

¹ The solicitude of the English government, at that and later periods, for the preservation of forests, was due in large measure to the belief that sources of lumber should be conserved for the building of naval vessels—then, of course, constructed of wood.

used coal and charcoal for fuel. The general use of coke, now the principal source of blast furnace heat, came much later.

We have seen (Chapter III, page 40) that iron ore was early discovered in the American colonies, and that throughout most of the colonial period it was worked on a small scale. By the beginning of the nineteenth century the iron industry had attained considerable proportions, particularly in eastern Pennsylvania, where ore and wood were found in quantities sufficient for all demands then existing or in prospect.² It is interesting to note that in the vicinity of Pittsburgh, now the center of the iron and steel industry of the United States, a small furnace was set up in 1792 by one George Anshutz, who abandoned his operation two years later for lack of ore. Pittsburgh, however, was not destined for long to be thus passed by in the development of the iron industry. Following the erection of a foundry there in 1803, other works were established, until in 1829 Pittsburgh had 8 rolling mills and 9 foundries. It is estimated that the production of pig iron in the United States was then about 100,000 tons a year.³

In the early iron industry of the United States, charcoal, made from wood, was the customary fuel. With its then seemingly exhaustless forests, the United States had a decided advantage in the cheapness of this fuel, and the forests were destroyed with the heedlessness that has characterized the American people in their use of many of their natural resources. About 1840 it was found that anthracite coal, which was abundant in proximity to many of the iron works, could

² We may here observe the interdependence of industries, always an important element of economic development. Modern steel manufacture depends upon supplies of ore and fuel and upon facilities for transportation of raw materials and finished products. Other manufactures are similarly concerned with allied enterprises. Upon this principle, in part, has grown up the present-day "vertical trust," which means a combination covering all stages of an industry, from raw materials to finished products.

³ Pig iron is the iron as it comes from the blast furnace after being separated from the other constituents of the ore. Usually it requires further treatment and purification before being cast or otherwise manufactured into finished products. In present-day practice, most of the pig iron finally is manufactured in the form of steel.

be used in the furnaces. This discovery created what has been described as a revolution in the iron industry, and laid the foundations for the enormous development of later years.

Hamilton's and Gallatin's Reports on Manufactures.—In 1791 Alexander Hamilton, then Secretary of the Treasury, made a report to Congress on the manufacturing industry of the United States. He showed that manufactures of leather, iron, tools and machinery, textiles, potters' wares, spirits, paper, hats, oil, sugar, hardware, carriages, tobacco, and gunpowder had progressed until they could be designated as regularly organized industries. The report added:

Besides manufactories of these articles, which are carried on as regular trades and have attained to a considerable degree of maturity, there is a vast scene of household manufacturing, which contributes more largely to the supply of the community than could be imagined without having made it an object of particular inquiry.

A later Secretary of the Treasury, Albert Gallatin, described the condition of manufactures in 1809. Gallatin showed that the production of wood, leather, soap, tallow and wax candles, flaxseed oil, sugar, earthenware, snuff, hair powder, chocolate, and mustard was sufficient for the needs of the country. American manufactures also supplied a considerable part of the demand for cotton, wool, flax and hemp products, hats, paper, books, playing cards, liquors, gunpowder, window glass, jewelry, clocks, lead products, and some other articles. He estimated the value of American manufactured products at more than \$120,000,000 a year.

In the census of 1810, the value of all manufactures was given at \$198,613,474. Of this annual output, about one-half consisted of textiles, iron, leather, and liquors.

Condition of American Wage-Earners.—With the growth of manufactures, it is natural that we should find increasing importance of a class previously little noted—the industrial wage-earners. As in England a few years earlier, the workers flocked from the fields into the shops and factories of the towns. There was an essential difference, however, between conditions in England and those in the United States. In England, there had existed a somewhat rigidly defined working class long before the Industrial Revolution. In the United States, classes were not strictly defined. The laborer had the opportunity of becoming an independent worker or even a proprietor. Of this fact, which has had profound effects upon the development of industry, and in particular upon that of the labor movement, we shall have occasion to make closer observation in later chapters.

At the close of the colonial period the condition of the American workman on farm or in factory, while sufficiently comfortable according to the standards of the time, was far inferior to that of the meanest toiler of the present day. One of the vital facts of American industrial history has been the enormous improvement in the condition of the wage-earners. The historian McMaster thus describes the state of the worker in 1784:⁴

Their houses were meaner, their food was coarser, their clothing was of commoner stuff, their wages were, despite the depreciation that has gone on in the value of money, lower by one-half than at present [1893]. On such a pitance it was only by the strictest economy that a mechanic kept his children from starvation and himself from jail. [Imprisonment for debt still was customary in the early days of the republic.] In the low and dingy rooms which he called his home were wanting many articles of adornment and of use now to be found in the dwellings of the poorest

⁴History of the people of the United States, by John Bach McMaster, Vol. I, p. 96.

of his class. Sand sprinkled on the floor did duty as a carpet. There was no glass on his table, there was no china in his cupboard, there were no prints on his wall. What a stove was he did not know, coal he had never seen, matches he had never heard of. Over a fire of fragments of boxes and barrels, which he lit with sparks struck from a flint, or with live coals, brought from a neighbor's hearth, his wife cooked up a rude meal and served it in pewter dishes. He rarely tasted fresh meat as often as once a week. . . . If the food of an artisan would now be thought coarse, his clothes would now be thought abominable. . . . His sons followed in his footsteps, or were apprenticed to neighboring tradesmen. His daughter went out to service.

The customary day's work was from sunrise to sunset.

As we proceed further with our study, we shall have occasion to watch the gradual emergence of the wage-earner from the poverty of the early nineteenth century to the relative comfort of his present condition. For this improvement we shall find numerous causes. Chief among them, however, has been the gain in the productive capacity of industry. It is a fact attested by both history and economics that the wage of the worker, like the profit of the employer, has risen with the increase in production, out of which both parties must receive their rewards.

The Beginning of American Labor Organizations.—

Organizations of American workmen before the Revolution were few and insignificant. The organized labor movement in this country may be said to have started in the early years of the nineteenth century. The New York Society of Journey-men Shipwrights was formed in 1803. The New York carpenters formed an organization in 1806. The New York compositors-(typesetters) had a union some time before 1817. Other trades organizations were formed about the same time.

These early societies of workmen gave little indication of

the future strength of organized labor. At times, however, their activities came into public notice. In 1827 a strike of Philadelphia carpenters seeking a ten-hour day led to the organization in that city of the Mechanics' Union of Trade Associations. The next year this association nominated labor candidates for the city council and for the state legislature, and succeeded in electing a considerable number of them.

In 1830 a workingmen's convention was held at Syracuse, New York, and nominated one Ezekiel Williams for governor of the state. In the election, however, Williams received fewer than 3,000 votes.

Various local organizations in New York had united by about the year 1832 to form the General Trades Unions of the City of New York.

On May 15, 1832, the merchants and shipowners of Boston met and adopted resolutions to "discountenance and check the unlawful combination formed to control the freedom of individuals as to the hours of labor, and to thwart and embarrass those by whom they are employed and liberally paid."

English laws of the eighteenth and early nineteenth century made combinations of workmen criminal conspiracies, and the leaders of such organizations were subject to heavy penalties. In the earliest days of the American labor movement, we find a few instances of attempts to apply the same theories to American trades unions. When the sailors of New York went on strike in 1803, the strikers were dispersed and their leader was sent to jail. Soon, however, American laws recognized the legality of trades organizations, provided their actions were not contrary to property rights or public policy.

TOPICS FOR REVIEW AND DISCUSSION

1. Describe the early efforts of American manufacturers to secure the secrets of textile machinery.
2. Why did the manufacture of cotton goods grow more rapidly than that of woolsens?

3. What was the cotton gin, and why was its invention important to the textile industry?
4. Describe some of the colonial experiments in iron production. (See also Chapter III.) Some of the developments after the Revolution.
5. What were the conditions of American labor at the close of the Revolution?
6. Describe some of the early labor organizations.
7. Study in an encyclopedia or other reference work the life of Albert Gallatin; report on his services to the government.

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CHAPTER VIII

ALEXANDER HAMILTON, THE DEBTS, AND THE FIRST BANK OF THE UNITED STATES

Preserving the Nation's Credit.—The patriotic student of economic history may feel a just pride in the record that the United States throughout its national existence has maintained its credit substantially unimpaired. Financial blunders there have been in abundance. At times the currency has been allowed to depreciate through unwise policies of the Treasury. Even the metal coinage has been tampered with at the dictates of partizan or sectional politics and in defiance of sound economic principles. At every time of test, however, the government has dealt fairly with its creditors. The importance of this scarcely can be overestimated.

This policy of governmental honesty and of recognition of the necessity of an unstained national credit is a heritage of the earliest years of the republic. Then, under temptations greater than any to which the nation since has been subjected, the people, through their representatives, deliberately turned their backs upon the lure of repudiation and decided that public obligations should be paid. This decision, momentous in its results then and thereafter, was made under the leadership of one far-seeing financial genius. The manner in which this came about we shall observe in the present chapter.

Public Debt at Close of Revolution.—The close of the Revolution found the finances of the new nation in a state of seemingly hopeless confusion. The war for independence had been financed in small part by taxes (see Chapter V, page 55), to which, under the Articles of Confederation, the sepa-

rate states had to consent before they could be collected; in part by the issuance of huge sums of paper money; and in part by loans contracted sometimes by the central government, sometimes by the states. We have seen that the paper money was issued until it reached a mythical face value of more than \$240,000,000. Before the close of the war this paper money depreciated until at times it was worth only one cent on the dollar. Finally it disappeared from circulation altogether.

The debts representing money borrowed at home and abroad for the expenses of the war, however, did not disappear. The new government was faced with obligations which, at the time the Constitution was adopted, amounted to more than \$75,000,000, a huge total for that time, and a staggering burden for a nation barely emerged from a war for independence.

Failure of Continental Congress to Raise Revenue.—

Before the adoption of the Constitution, Congress struggled in vain to raise revenue to pay even the interest upon the debt owed to foreign creditors. Under the Articles of Confederation, Congress, in attempting to raise funds, could call upon the states for money which the states were supposed to be in honor bound to supply. In practice, the states furnished as much or as little money as they felt inclined to do. Between 1782 and 1786 Congress called for more than \$6,000,000, and at the close of March, 1787, the sums received had totaled about \$1,000,000. Temporary loans had to be contracted, at high interest, to pay even the interest due on the foreign debt. The urgent need for a government strong enough to bring order out of financial chaos was one of the main incentives which finally led to the adoption of the Constitution. This gave the national government power to borrow funds and to repay them, to levy taxes, to regulate commerce, and to coin money.

In the meantime the credit of the government had fallen until certificates representing the public debt sometimes changed hands at figures as low as 15 cents on the dollar. Few persons had any notion that the debts ever would be paid in full.

Alexander Hamilton and the National Debt.—Fortunately for the credit of the new government, and for the whole future course of American history, the post of Secretary of the Treasury in Washington's cabinet was held by one of the most remarkable men in the nation's annals. Alexander Hamilton, born in the West Indies, of Scotch and French parentage, was under thirty years old when the Revolutionary War ended, but already he had won honors as an officer and a member of Washington's staff, and had given evidence of that financial insight which soon was to become his chief claim to distinction. Hamilton was an economist, in a nation in which at that period economic knowledge was rare. The far-reaching benefits which accrued to the United States through following his advice show the importance of the economic point of view in the policies of governments.

The Secretary of the Treasury lost no time in grappling with the problem of the public debt. His keen and discerning intellect saw the necessity of building up the credit of the new government, and his intellectual honesty and his self-confident courage did not shrink from the only logical means of doing it. In 1790 he submitted to Congress a report on the public debt. This report showed that the federal government owed foreign creditors \$11,710,378, upon which the accumulated interest exceeded \$1,500,000. This foreign debt was owed principally to France, although a part had been incurred in Spain and a part in Holland. Creditors within the United States held valid claims amounting in the aggregate to \$42,414,085. In addition to this debt of the central government, separate states had

borrowed money in aid of the revolutionary cause, and of these debts a total of about \$25,000,000 yet was unpaid. Hamilton recommended that the government acknowledge and ultimately pay off not only the national debt but the debts of the states, in the meantime issuing new notes in exchange for the old certificates, the interest rate to be 6 per cent.

Government Assumes Revolutionary Debt.—Hamilton's proposal was received with enthusiastic support in some quarters, with heated opposition in others. As to the necessity of paying the debt owed to foreign creditors there was little argument; it was realized that these obligations must be met to maintain the nation's credit abroad. As to the domestic debt, however, there was no such agreement. Many honest and patriotic men contended that, as a large part of the certificates were in the hands of purchasers who had procured them from the original lenders at discounted prices, sometimes as low as 15 cents on the dollar, the assumption and repayment of these obligations would reward, not patriotic supporters of the Revolution, but mere speculators. These arguments were given color by the fact that, as soon as Hamilton's recommendations had been made known, moneyed men in the cities sent swift couriers to outlying sections of the country with instructions to outstrip the slow-moving mails and buy up as many of the certificates of the public debt as could be had. Many certificates actually were thus purchased before the holders learned of Hamilton's proposals.

After a prolonged resistance in Congress, Hamilton's view prevailed. The bill for refunding the national debt passed in August, 1790. There was yet a hard struggle before Congress could be brought to assume the revolutionary debts of the states. Finally a compromise ¹ was reached, by which the state

¹ For an illuminating account of this compromise, the student is referred to *History of the United States*, by James Schouler, Vol. I, p. 154.

debts were assumed, but with an arbitrary limit of \$21,500,000.

It would be difficult to overestimate the service rendered by Hamilton and his supporters in securing the assumption and payment of the national and state debts and thus placing the credit of the United States upon a firm basis. At one step, as it were, the United States mounted from the lowest plane of public credit to the highest. Never in the future was the nation confronted with serious difficulty in raising funds for war or other purposes. The imagination hesitates in the attempt to conceive the results of a different course. Failure to pay the foreign debt would have resulted in commercial reprisals, diplomatic pressure, and perhaps in open hostilities. America would have been an outcast among the nations of the earth. Repudiation even of the domestic debt would have made it well-nigh impossible for many years for the government to borrow money, however sore its needs. Recent history has furnished illuminating instances—fortunately in most cases on the part of feeble or fleeting governments—of the repudiation of public debts. The result invariably has been disaster. Among the most difficult problems growing out of the World War were those connected with the fact that some governments boldly repudiated their debts, while others, although professing willingness to pay, confessed that they were unable to do so.

Beginning of the Coinage System.—The scarcity of coined money which hampered trade during the colonial period (see Chapter IV, page 47) took on an even more serious aspect during the Revolution and in the early days of the republic. Until after the Constitution was adopted most of what metallic money was in circulation was of foreign origin, with its value varying in different localities. The most customary units were the English pound and the Spanish dollar, the latter being

valued at from 4 to 8 shillings. This confusion of coinage was made worse by the prevalent practices of cutting coins into fractions to serve as small change, and of "clipping" them to remove a part of the gold or silver.

In January, 1782, a report was made to Congress by Robert Morris, the financier of the Revolution, recommending the creation of a national currency.² He suggested that the Spanish dollar be taken as a standard, that its value be made uniform, and that the units and subdivisions should increase and decrease in decimal ratio—that is, by tens. At the time, no action was taken on this report, but later it became the basis of a report presented by a congressional committee of which Thomas Jefferson was a member. Finally on July 6, 1785, Congress adopted a resolution by which the dollar was made the unit of coinage. Until a considerable period after the adoption of the Constitution, however, few coins were struck off, especially since under the Articles of Confederation the authority to coin money was reserved by the states.

The United States Mint.—In April, 1792, the Constitution in the meantime having been adopted, Congress enacted what was known as the "Mint Act." This law established a mint at Philadelphia, and provided for the coinage of gold and silver, both metals being made legal tender.³ The unit (dollar) was to contain 24.75 grains of pure gold or 371.25 grains of pure silver, the ratio thus being set at 15 to 1.

For many years the amounts of gold and silver available for coinage were small, and little metallic money was circulated. One of the causes of this condition was the fact that as years passed the ratio of 15 to 1 was found not accurately to represent the relative commodity value of the two metals.

² Robert Morris gave much of the credit for the coinage section of this report to his young assistant, Gouverneur Morris.

³ Money is said to be made legal tender when a creditor is required by law to receive it if offered in payment of a debt.

Gold as a commodity was worth more than its coinage value, expressed in terms of silver coin. It is a recognized economic law that when two kinds of money are circulated side by side, that which has the higher intrinsic or commodity value will be bought up and exported or melted for bullion.⁴ Reduced to its simplest form, the law means just this: If the gold in a gold dollar is worth more in the metal markets than the silver in a silver dollar, a man who exchanges a silver dollar for a gold dollar can sell the gold dollar to a jeweler or an exporter for more than a dollar in silver. He has thus made a profit on the whole transaction, represented by the amount of silver coin he receives in excess of the silver dollar with which he started. In accordance with this law, gold coin disappeared from circulation under the Coinage Act of 1792.

In 1834 and 1837 Congress attempted to remedy this condition by changing the ratio to 16 to 1. This, however, overvalued gold in the same manner that it had been undervalued in the earlier ratio, and silver coins, now worth more as bullion than their coinage value in terms of gold, began to be bought up for export or for melting. The gold discoveries of 1848 and subsequent years, by further cheapening gold as a commodity, increased this disparity in value, and it was found practically impossible to keep enough silver coin in circulation to serve as small change.

Finally, in 1853, Congress passed a law reducing the amount of pure silver in the subsidiary coins; that is, the coins of less value than the dollar. Thus these coins became what is known as "token money," or money lacking its full face value in metal, and the incentive to export or melt them disappeared. At the same time they were deprived of their unlimited legal tender quality. Silver dollars, which still contained their full

⁴This is known as Gresham's law. It will be found stated in full in an encyclopedia or a standard work on economics. It is necessary to use care, however, not to attempt to apply this law, in an unmodified form, to paper money, the value of which does not depend upon the commodity value of the material of which it is made.

weight of silver, practically disappeared from circulation for many years.

The First Bank of the United States.—One of the causes which at the outset contributed to the limitation of the amount of metallic money in use was the creation of the first Bank of the United States, which was authorized to issue notes which circulated as money. The suggestion for a national bank came from Hamilton, and aroused intense opposition from those who feared that it would establish a dangerous monopoly of financial power. The act chartering the bank was passed in 1791.

Under its charter, which was for a term of twenty years, the bank was authorized to issue capital stock to a total of \$10,000,000. Of this capital, the government subscribed one-fifth and private stockholders the remainder. The bank was empowered to establish branches. It could issue notes, with the provision that all its debts should not exceed its deposits by more than \$10,000,000, the amount of capital stock. The notes being secured by the capital stock, and the credit of the bank being maintained, the notes did not depreciate as had the unsecured Continental currency of the revolutionary period.

The central bank was established at Philadelphia, and branches were opened in New York, Boston, Baltimore, Washington, Norfolk, Charleston, Savannah, and New Orleans. The government sold its stock at a premium in 1802, and after that the bank was privately owned, although it continued to be the official financial agency of the government. The institution was creditably managed, and operated with success during the twenty-year term of its charter.

The Bank's Charter Not Renewed.—Before the expiration of its charter, the bank made application for a renewal, with an increase of capital to \$30,000,000. Reports issued by the

bank's managers showed that its notes in circulation were about \$5,000,000, its total debts slightly in excess of \$13,500,000, and its resources more than \$23,000,000. There was no doubt that the bank, at least in the later years of its existence, had been ably and honestly managed, and that it had been a valuable financial agency of the government, as well as an aid to business and a stabilizer of the currency.

Growing democratic ideas, however, were prone to take a financial monopoly as a target for their attacks. The institution was under fire also from the supporters of state banks, which might hope for greater prosperity if their powerful rival were out of existence. In spite of the able support of Albert Gallatin, Secretary of the Treasury, a bill for renewing the charter was defeated, and the bank closed its doors.

After the Bank of the United States had gone out of existence, in 1811, many new state banks sprang up, and the country was flooded with bank notes which lacked the stability of those which had been put out by the national institution. During the War of 1812 many banks failed, while others were compelled to cease the redemption of their notes in specie, or metallic money. Bank notes suffered severe depreciation in value, both from impairment of credit and from oversupply. For a time it seemed that the currency confusion of the Revolutionary period might return. This situation was arrested, however, by the formation of the second Bank of the United States.

TOPICS FOR REVIEW AND DISCUSSION

1. What was Hamilton's plan for taking care of the public debt? On what grounds was it opposed?
2. How was the financial situation of the government changed after the adoption of the Constitution?
3. What was the source of metallic money before 1792?
4. What was the Mint Act? Describe the means adopted up to 1853 to keep both gold and silver in circulation.

5. What is Gresham's law?
6. Why did Congress incorporate the Bank of the United States and what were some of the terms of its charter?
7. Why did not the bank obtain a renewal of its charter? What were some of the results of the closing of the first Bank of the United States?
8. Study in an encyclopedia or other reference work the life of Alexander Hamilton; report on his political and financial career.

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CHAPTER IX

THE SECOND BANK OF THE UNITED STATES, ANDREW JACKSON, AND THE PANIC OF 1837

The Second Bank of the United States.—Within five years after the first Bank of the United States had been denied a new charter, the oversupply of state bank notes and the doubtful credit of many of the issuing banks had caused serious depreciation in the value of the currency. The extent of bank note discount varied from 10 per cent in some eastern regions to as much as 50 per cent in the west. During the War of 1812 most banks in the country suspended specie payments. Already thinking men in all parts of the United States were advocating the establishment of another central bank, by means of which credit could be restored and the currency stabilized.

In 1814 Alexander J. Dallas of Pennsylvania was appointed Secretary of the Treasury by President Madison. The first recommendation which the new Secretary made to Congress was for the establishment of a United States bank. He renewed the recommendation in December, 1815, and by an act of April 10, 1816, Congress chartered the second Bank of the United States.

Early Years of the Second Bank.—Under its charter, which was for a term of twenty years, the bank was to have a capital stock of \$35,000,000, of which \$7,000,000 was to be subscribed by the United States and the rest by individuals, corporations, or states. It was prescribed that no single subscription should exceed 3,000 shares of a par value of \$100 each. Management of the bank was under control of 25

directors, of whom the government appointed 5. The central bank was established in Philadelphia, with branches in the principal cities of the country.

In its early years the bank was mismanaged. Loans were made on insufficient security, circulating notes were issued in excess of the amount authorized by the charter, and stockholders were allowed to delay the full payment for their shares. This evil state of affairs was brought to a head by disclosure of serious mismanagement in the Baltimore branch, and the bank at the end of the first three years was reorganized on a more substantial foundation. In this reorganization a prominent part was played by Nicholas Biddle of Philadelphia, first appointed as one of the government directors and later made president of the bank.

After its affairs had thus been set in order, the bank operated successfully for a number of years, and gave general satisfaction, in spite of an undercurrent of opposition from state banks and from those who believed a monopoly of banking power was a menace to free government. This opposition was particularly strong in the new districts of the west, where speculation was popular, particularly in connection with the purchase and sale of public lands, the abundance and cheapness of which made them tempting objects of trade; where the desire for ready credit and for an abundant currency with which to pay debts created a demand for a constantly increasing supply of money; and where financial knowledge and conservatism generally were lacking.

Jackson and the Democratic Party.—The Republican party of Jefferson had survived the downfall of its ancient Federalist rival, and after a period of undisputed supremacy had split into two factions. Those still calling themselves "Republicans" comprised the more conservative voters, and were under the leadership of such men as Henry Clay, John Quincy

Adams, and Daniel Webster. The other faction became known as the "Democratic party." It comprised the more radical members of the community, making its appeal particularly to the rank and file of the people. Its leader was General Andrew Jackson, who had become a popular hero through his victory over the British at New Orleans near the close of the War of 1812.

Jackson was elected President in 1828, having in the meantime acquired a bitter personal and political antagonism toward Henry Clay. During the greater part of Jackson's two terms, Clay, then in the Senate, was a leader of the opposition and himself an aspirant to the presidency. This political situation had momentous results. For our purpose, those which had a bearing upon financial and economic history will be considered.

Jackson Attacks the United States Bank.—Historians assign different reasons for the origin of Jackson's hostility to the Bank of the United States. Probably, as a Tennessean, he shared the prevalent western suspicion of a money power. Then, soon after his accession to the presidency, complaints against one of the branch banks reached his ear, adding to whatever prejudice he already possessed. Whatever may have been the cause, Jackson in his first message to Congress, in December, 1829, took occasion to criticize the bank and to suggest, as a substitute, a national bank under complete control of the government.

Jackson's message came at a time when the bank was, to all appearances, prosperous, and when its management was in the main above reproach. Moreover, the charter was not to expire until 1836, three years after the close of the term for which Jackson had been elected. It happened, however, that the friends and the enemies of the bank alike were eager to push the fight, each seeing an advantage in an early decision.

Congress Votes New Charter; Jackson Vetoes Bill; the Election.—Clay, in particular, desired to take up the question of a new charter at once, believing that if the issue of the bank were thrown into the presidential campaign of 1832 it would work to the injury of the Democratic party. Accordingly, under the leadership of Clay, Congress in 1832 passed a bill renewing the charter for another term of twenty years. The bill went to the President, who accepted the challenge and promptly vetoed the act. Friends of the bank were unable to muster the two-thirds of each house necessary to pass the bill over the veto.¹

As Clay had planned, the issue of rechartering the Bank of the United States was taken into the presidential campaign of 1832. As Clay had not planned, however, Jackson was elected by an overwhelming vote. However profound may have been the old warrior's ignorance of financial subjects, he had no lack of astuteness in politics.

Government Deposits Removed from the United States Bank.—Jackson took his election as an expression of popular indorsement of his hostility to the United States bank, which by this time had become a personal quarrel into which he flung all the energy of his fiery nature. His next move was bold and unexpected. He ordered the government funds removed—gradually, it is true—from the Bank of the United States and deposited in a selected group of state and local banks. With difficulty the Bank of the United States withstood this assault upon its resources and its credit. It weathered the storm by careful banking practice and good management, but from then on it was doomed. Although the Senate passed a

¹ The charges made against the Bank of the United States by Jackson and his adherents were varied and at times vague. Chief among them were that the bill by which the bank had been chartered was unconstitutional, that the bank was a monopoly, that its directors favored political friends in making loans, and that the bank had been remiss in caring for the government's financial interests. It must be remembered that the contest was largely personal and political, and that statements by each faction often were made recklessly and for political effect.

vote of censure against the President, and Jackson was assailed, now with threats, now with entreaties, by thousands of his fellow citizens, he had won the fight. Failing to secure a new charter from the government, the bank operated for a few years under a state charter granted by Pennsylvania, and finally died in 1841. It is interesting to note that in the years of its decline the bank actually became guilty of many of the faults with which it had been charged, in the main falsely, in the time of its prosperity.

State Banks, Inflation and Speculation.—Jackson's order for the removal of the federal deposits from the Bank of the United States was issued September 26, 1833, after the President had dismissed a Secretary of the Treasury who refused to be a party to the plan and had appointed another, more compliant, in his place. The funds which the government from that time had for deposit were entrusted to a list of state banks, at first 23 in number. Political and other pressure soon brought an increase in the number of government depositories. Says the historian Schouler:²

Now sprang up in the states a mania for new banks and new paper. The twenty-three pet banks with which Kendall organized the new system in 1833 were all too few to hold custody of the public moneys. Every quarter of the union, every state, every district having party constituents to please, must run with its barrel, its pitcher or its cup to share the Pactolian stream which spouted from the national treasury. . . . And thus did it come about that bank loans were enormously expanded and the business of the country worked up into fever of speculation whose crisis was reached in three years. Instead of stringency in the money market, the evil at first apprehended, Jackson's empiricism cost the country in the end a calamitous inflation.

² History of the United States, by James Schouler, Vol. IV, p. 173.

This inflation, which was due largely to the unrestrained creation of new banks, many of which loaned money recklessly for speculative purposes and issued circulating notes far beyond the limits of prudence and the needs of the country, was helped along by other factors. Among these was the mania for speculation in public lands, which at this time reached enormous proportions. Government receipts from the sale of lands, which had averaged less than \$2,000,000 a year before 1830, reached a total of \$25,000,000 in 1836. We shall have occasion in later chapters to study the government's public land policies. For the present it is sufficient to call attention to this form of speculation, adding that many of the unsafe loans made by the banks were for the purpose of financing these land purchases

Public Debt Paid off.—Another cause of unhealthful expansion was the result, indirectly, of the payment of the last instalments of the national debt. To the present generation, unpleasantly familiar with the heavy taxes incident to a public debt running high into the billions, the thought that freedom from debt could be a misfortune may come as a surprise. Nevertheless, it is true in governmental affairs that the ideal condition is a close balance of revenues and expenditures, and that an unaccustomed surplus, whether resulting from the liquidation of debt or from some other cause, almost invariably results in extravagance, inflation, and disorder of the financial system. This is what happened in the middle thirties.

The public debt had amounted in 1816 to more than \$127,000,000, but through the wealth of natural resources, the prosperity of commerce, and the income from tariff duties, it had been wholly paid before January 1, 1835. By the next year the Treasury reported a surplus, which Congress, in some perplexity, decided should in future be distributed to the states in the form of "loans." This flood of unearned money

added to the extravagance and reckless speculation of the times. In a brief period there was no surplus to divide.

By the middle of 1836 business and finance had reached the climax of expansion. The financial situation was like an inflated bubble, which needed but a pin-prick to cause it to explode. The pin-prick was supplied by Andrew Jackson.

On July 11, 1836, was issued, at the order of the President, the famous "specie circular," which directed that nothing but gold and silver should be received in payment for public lands. This sudden strain upon the slender stock of hard money in the country was more than the financial system could stand. It precipitated the panic of 1837, one of the most severe of all the financial crises through which the nation has passed.

The Panic of 1837.—This panic was the result, as we have seen, of overconfidence in a partly fictitious prosperity, inflated loans for speculative purposes, and the issuance of an oversupply of unsound currency by the banks. These conditions had been brought about largely, although not wholly, by the successful onslaught upon the Bank of the United States. The effects of the panic were felt in every section of the country in business stagnation, bankruptcies, bank failures, unemployment, and "hard times." The banks of New York suspended specie payments May 10, 1837. Their example was followed by the banks of Boston, Philadelphia, Baltimore, and other cities. Prices and wages fell. Real estate values did not cease to decline for several years. Suffering was intense and spread to all classes of the people.

Panics and Business Cycles.—The financial collapse of 1837 was the first important business crisis of the several through which the United States has passed. These recurring "panics" have, in fact, been among the striking phenomena in

the economic history, not only of the United States but of the world. Some of them have occurred simultaneously in America and Europe; others have been national in character.

A period of business depression, whether it comes in the form of a financial crisis or in that of a gradual slowing down of industry, is one phase of what is known as the "trade cycle." The events in a typical trade cycle are somewhat as follows:

An era of prosperity, with ample business, employment, and credit, begets inflation and overproduction. Extravagance in buying, sometimes aided by too great expansion of credit or of currency, leads to soaring prices. After a time this period comes to an abrupt halt, usually as the result of a general loss of confidence in the stability of the business situation. Sometimes the signal is given by some outside circumstance, like the specie circular issued in 1836. Credit is restricted, loans are called (in the earlier period banks were subjected to "runs") and business enterprises find difficulty in raising money to pay their debts, if indeed they succeed in raising it at all. Usually there are many business failures. Unemployment and hard times follow. From this period of depression there begins a gradual recovery, which ends in another period of prosperity and inflation followed by another downward trend.

It remains to be noted that the events in this cycle are not simultaneous in different parts of the country or in different branches of business. In the United States, both upward and downward movements usually start in the east and spread westward. Rising and falling tendencies generally are seen first in stocks and bonds (the market for which often anticipates and "discounts" movements of the business world), next in commodity prices, then in wages, and finally in real estate values.

The business depression attendant upon the 1837 crisis lasted for five or six years. They were years of retrench-

ment and contraction. Bank note circulation decreased from \$149,000,000 in 1837 to \$58,000,000 in 1843. Gradually business, now established upon a more substantial basis, recovered, and the prosperity of the nation revived.

The Independent Treasury.—One result of the financial upheavals of 1832-1837 and the downfall of the Bank of the United States was the establishment, in 1840 and 1846, of the Independent Treasury system. Under this system the government was to care for its own funds, storing them in its Treasury and in sub-treasuries established for the purpose. Money was to be received and disbursed only in the form of gold and silver. By the establishment of the Independent Treasury the divorce of the government from the banking power was made absolute.

Jackson's war upon the United States bank, and the evil results which came from it, serve admirably to illustrate the dangers to be faced when politicians heedlessly tamper with the delicate mechanism of finance. By making the destruction of the bank a successful political issue, Jackson not only added to the severity of the panic of 1837—if he may not even be said to have actually caused the panic—but he established a political tradition which for generations stood in the way of a logical financial policy by the government. Probably the Bank of the United States would have required some radical changes in organization and methods as the years passed. Certainly, however, a central banking system under government supervision could have handled the financial and currency affairs of the public more efficiently than they were handled during the long period of complete divorce between the government and the banks. This fact was recognized, tardily and somewhat grudgingly, in the enactment of the Federal Reserve Law in 1913.

TOPICS FOR REVIEW AND DISCUSSION

1. Why was the second Bank of the United States established and what were some of the provisions of its charter?
2. What were some of the political causes of Jackson's attack on the bank?
3. Trace the moves by which the bank was destroyed by Jackson and his supporters, and the efforts by which its friends tried to save it.
4. What were some of the results of the downfall of the bank?
5. Describe the panic of 1837 and name some of its causes.
6. What was the Independent Treasury system?
7. Study in an encyclopedia or other reference work the life of Henry Clay; report on his political career up to 1837.
8. In similar manner study the life of Andrew Jackson.

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CHAPTER X

THE CONQUEST OF THE WEST

Abundance of Land Fundamental in American History.—

The student of American economic development would miss one of the most significant features of the story if he failed to give due regard to the importance of one fact which distinguishes the history of the United States from that of nearly every other civilized nation. That fact is the abundance of land.

We already have noted (See Chapter VII, page 72) that this seemingly inexhaustible supply of land for farming was one of the important factors in retarding the growth of manufactures. It exerted an influence, however, in many other directions. Throughout the first century of the nation's history, and to a less degree down to the present time, this influence has been felt in industrial conditions, in social institutions, in immigration, and in politics. In this and some of the following chapters, significant elements of the land factor in economic development will be observed. At this point we may note, in passing, that some of the most troublesome problems of the present day have resulted from the approximate exhaustion of the supply of free land, and the simultaneous, if not wholly consequent, increase in the price of areas suitable for farming. No longer is it possible for the man seeking a home and an occupation to secure easily cultivable acres for little or no payment. The youth who seeks to follow the time-honored injunction, "go west and grow up with the country," finds that the country already has grown up and that the land which once was to be had for the asking is now closely held. The American people

have been forced, gradually and reluctantly, to adjust their ideas and their aspirations to this change in fundamental conditions.

Land and Its Influence upon Labor.—In the England of the early nineteenth century industrial and social classes were relatively rigid. With a crowded population and with the available land privately owned and held at prices above the reach of the masses of the people, it was difficult for a man to change the conditions under which he had been born. A mechanic might be ever so little satisfied with his wages or with the treatment he received from his employer, but ordinarily he had no choice but to remain at his bench. Thus early in the industrial development of England we find the beginnings of a labor movement, the purpose of which was to raise the level of whole classes of workmen, rather than to help the individual laborer rise into a more fortunate stratum.

In the United States at that period conditions were wholly different. If the town workman became discontented, or if he lost his employment through a strike or a period of business depression, it was comparatively easy for him to migrate with his family, secure a farm in a newer section of the country, and become a tiller of the soil. With the worker thus independent, the factory system of the United States found its labor supply often insufficient and unstable. Another result of this frequent shifting from the factory to the farm is seen in the comparative weakness of the early American labor movement. (See Chapter VII, page 79.) With an available easy means of escape from unsatisfactory conditions, the American workman found it difficult to interest himself vitally in the uplift of the whole laboring class. Thus his adherence to labor organizations was easily severed.

But it was not only the laborer who availed himself of the

abundant lands of the west. The business man who had failed; the discharged soldier seeking a new career; the professional man unable to build up a patronage in the towns; the clerk thrown out of employment in a period of business stagnation—all found in the public lands a way of escape and an opportunity to begin life anew with equal chances of success. Each period of business depression sent a fresh wave of fortune hunters into the west. Thus, in the panic of 1837 (See Chapter IX, page 98) the normal stream of settlers was swelled by thousands who had lost employment or business in the towns.

Swift Development of the West.—All these conditions helped in making the development of the American west one of the most remarkable movements of modern history. Within a comparatively few years, vast tracts of virgin forest and untrodden prairie were brought under cultivation, while their population increased from a few scattered pioneers to hundreds of thousands of prosperous families.

As the west was developed and began to be the reservoir for food supplies for the whole nation, significant changes took place in the older states. The New England farmer, with a large investment in a tract of relatively unproductive land, found himself forced into competition with the planter of Ohio or Illinois, whose broad acres, secured at slight cost, produced crops with lavish abundance. This situation was made more acute when, as we shall see, improved means of transportation brought the food products of the west quickly and cheaply to the tables of eastern consumers. Thus, agriculture in the east, particularly in New England, began to decline and to be succeeded by the factory industry which was steadily gaining in importance. As the years passed, the northern Atlantic states came to be occupied more and more with manufacturing, commerce, and finance, and to depend

for their food supplies largely upon other sections of the country.

In later chapters we shall have occasion to observe the political and social problems growing out of the settlement of the west and the creation of new states. Let us here examine more particularly the events connected directly with the opening and settlement of the western lands.

Beginning of Large-Scale Migration.—In an earlier chapter it was learned (See Chapter VI, page 62) that at about the close of the Revolutionary War the states ceded their unsettled western lands to the central government, and that in 1787 Congress passed an act creating the Northwest Territory, which included the district between the Great Lakes and the Mississippi and Ohio rivers. In later years this territory was cut up into the states of Ohio, Indiana, Illinois, Michigan, and Wisconsin. On the other side of the Ohio River, Kentucky, originally a part of Virginia, was admitted to the Union as a state in 1792. Farther south, Tennessee, which had been ceded to the United States by North Carolina, gained statehood in 1796.

Thus, was opened for settlement a vast stretch of land, title to the greater part of which was held by the United States government. The question of how best to get this land into the possession of settlers soon pressed for an answer. Before the Revolution there had been little disposition to settle in the wilderness beyond the Appalachian Mountains. An impetus to settlement was given by the practice of paying Continental soldiers in certificates good for specified tracts of public land. At the close of the war many of these soldiers, without easy means of support in civil life in the older sections of the country, migrated to the west to claim their lands. Thus began the westward movement, which in a few years was sweeping hundreds of thousands of men, women, and children into

the Ohio Valley, the Great Lakes region, and the wildernesses of Kentucky and Tennessee.

The Government and the Public Lands.—At the beginning of this movement the government, in devising ways of distributing the public domain among the settlers, thought rather of the revenue to be derived from the sale of the lands than of the benefits to the nation from the development of the west. As a quick means of realizing this revenue, Congress sold large tracts to land companies, which in turn undertook to dispose of their holdings to farmers. Before 1788, the Ohio Company had purchased 1,500,000 acres, the Scioto Company had gained control of 3,500,000 acres, and 1,000,000 acres had come into the possession of one John Symmes. These large holders were able to purchase the land at prices and on terms which, reduced to specie, amounted sometimes to as little as 10 cents an acre. There was no restriction, except that afforded by competition, upon the prices they were able to exact from settlers. At the same time the federal government was itself disposing of smaller tracts at a price of \$1 an acre, payable in specie.

With this system of selling land to speculators, to be resold to settlers, there was almost universal dissatisfaction. Moreover, it failed to produce revenue in amounts up to the expectations of its sponsors. The government, as later it came to be admitted, had followed a mistaken policy in seeking immediate gains rather than the surer, if slower, benefits to be derived from encouraging the settlement of the western lands by actual cultivators. Time and again the land laws were changed, each amendment being in the direction of better facilities for enabling the individual settler to buy his farm directly from the government at a moderate price. In 1796 Congress enacted a law under which public lands were to be sold in lots as small as 640 acres, with a part of the purchase price deferred upon

the security of the land itself. In 1800 the law was changed so as to permit the sale of 320 acres, at a price of not less than \$2 an acre, three-fourths of the purchase money being payable in instalments extending over four years. The policy of giving a farm free, or nearly so, to a settler, in consideration of a fixed period of residence or a specified amount of cultivation, belonged to a later period.

In the era of reckless inflation preceding the panic of 1837, as we have seen (See Chapter IX, page 97) speculation in western land was one of the most prevalent methods of seeking quick wealth. Gamblers, financiers, and good-faith settlers joined in this mad game of chance, buying land with heedless optimism, confident that they could dispose of it in brief time at enormous profits. In the crash that followed the bursting of the financial bubble, hosts of these speculators were ruined.

Especially in the earlier stages of the western migration, many pioneers disregarded all land regulations and all titles except those won by the ax and the plow, and established themselves upon farms to which they had no legal rights. For many years the government engaged in efforts to dispossess these "squatters," often going to the length of burning their cabins and driving them, with their wives and children, from their clearings. Finally the squatters were forced to leave their homes or to secure more regular titles to their holdings.

Migration into the Ohio and Mississippi Valleys.—Undismayed by the blundering land policies of the government and by the avarice—or worse—of the speculating companies, the settlers in the meantime were pouring into the valleys of the Ohio and the Mississippi and the other raw sections of the country. The stream of immigration which began to trickle into the country beyond the mountains at the close of the Revolution, became a torrent of humanity, flowing

over the wooded wilderness and reaching the distant shores of the Great Lakes and the banks of the Mississippi.

It must be remembered that what was then known as the west began at the Appalachian Mountains, and comprised some of the most populous and prosperous districts of the present United States. The distances to be traversed were not great, judged by the standards of the present time, but in the then unsettled condition of the country, without modern means of transportation and with few roads fit for wagons, in the face of constant danger from the Indians, and with little or no means of communication with the homes which the emigrants were leaving, the journey was an undertaking which required resolution and the stoutest courage. It has been estimated that a migration from the eastern states to the Ohio country took more time and cost more money than did a voyage from Europe to the American coast.

The main artery of immigration was the Ohio River Valley, which afforded means of water transportation invaluable to the pioneers. The customary method of travel was by wagon or on horseback across the mountains to some point on the Ohio River, thence down the river by boat. Keel boats for passengers and flatboats for freight and livestock were purchased or chartered at the headwaters of the river, and often were broken up and used for building material when the settlers had reached their destination.

Immigration proceeded in a steady stream, sometimes swollen by tidal waves when a period of business depression, causing failure and unemployment, sent new throngs of fortune hunters into the western domain. The census of 1800 showed a total of 50,240 persons within the borders of the old Northwest Territory, then classified as the Indiana Territory and the "Territory northwest of the Ohio." In the census of 1820, the same area counted 792,275 inhabitants, divided among states and territories as follows:

Ohio	581,434
Indiana	147,102
Illinois	54,843
Michigan	8,896

Twenty years later, the population had grown to 2,924,728, and the state and territorial grouping was as follows:

Ohio	1,519,467
Indiana	685,866
Illinois	476,183
Michigan	212,267
Wisconsin	30,945

Occupations of the Settlers.—The primary occupation of the pioneers, like that of their ancestors in colonial days, was agriculture. After the first backwoodsmen, who lived by the rifle, the trap, or the fishing line, had moved yet farther west or settled down to a more regular existence, the new country rapidly was cut up into farms and brought under cultivation.

Difficulty of transportation retarded trade. The western settlements were largely self-contained and self-supporting. Only a few articles which could not be produced at home were brought from the eastern states. As the country became more settled, and the fertile soil produced more than was needed for the sustenance of the people, a trade with New Orleans began to be built up. This trade was carried on by means of the Ohio and Mississippi rivers, down which the grain, live-stock, cured meats, hides, and furs of the west were floated on huge flatboats, but it did not become really important until the introduction of the steamboat on western waters.

The Purchase of Louisiana.—West of the Ohio and Kentucky settlements, and extending to the then almost unknown Rocky Mountains, stretched the vast district of Louisiana, which had formed part of the original French possession in the New World. In 1763 that part of the French domain lying

east of the Mississippi, with the exception of the city of New Orleans and some adjacent territory, was acquired by Great Britain in the treaty which ended the French and Indian War. This portion of the former French territory fell to the American colonies when they gained their independence. That part of Louisiana lying west of the Mississippi had been ceded by France to Spain in 1762 (see Chapter V, page 52), and in 1800, by consequence of another turn of the wheel of European politics, Spain, in turn, ceded this district back to France.

In the meantime there had been much friction between Spanish and French authorities and American settlers, and in 1803 the whole of Louisiana was purchased from France by the American government for approximately \$15,000,000. The domain thus purchased included the present state of Louisiana (the portion west of the Mississippi), Arkansas, Missouri, Iowa, Minnesota (the portion west of the Mississippi), the Dakotas, Nebraska, most of Kansas and Oklahoma, Wyoming, Montana, and part of Colorado. Its acquisition is probably the outstanding service rendered to his country by Thomas Jefferson. Without the Louisiana Purchase, the development of the United States, on anything like its actual scale, would have been impossible.

In a desire to learn more about the limits and the resources of the country west of the Mississippi, Jefferson dispatched the Lewis and Clarke exploring expedition (1803-1806) into the northwest. Based largely upon the reports brought back by this expedition, settlement soon was begun in the Oregon country. With the discoveries of gold in California in 1848 and in Colorado in 1852, the migration into the far west was well under way. The settlement of the Mormons in Utah in the late forties was an interesting minor phase of this westward movement.

TOPICS FOR REVIEW AND DISCUSSION

1. What were some of the effects upon the conditions of American life resulting from the abundance of land?
2. When did migration into the west become important? What were some of the causes of the movement?
3. Why was there an increase of western settlement at each period of business depression?
4. What were some of the difficulties encountered by the pioneers in their migration and settlement?
5. What were the early methods adopted by the government for disposing of the public lands?
6. What were the principal occupations of the settlers?
7. What was the Louisiana Purchase?
8. Study in an encyclopedia or other reference work the details of the Louisiana Purchase; report on the causes of this purchase, the progress of the negotiations, and the varying opinions in the United States as to the wisdom of Jefferson's policy.

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CHAPTER XI

THE DEVELOPMENT OF TRANSPORTATION

The Importance of Transportation.—In a country of vast area, of widely separated commercial centers, and of relatively sparse population, the advance of civilization, the welfare of the people, and even the permanence of the national government depend in large measure upon the ease with which intelligence can be transmitted from one part of the nation to another and with which persons and commodities can be carried from place to place. In this respect the United States has been fortunate. The steamboat, the canal, the railroad, the telegraph, the automobile, and the wireless have come, each seemingly at the exact time when the national expansion and development had reached a point at which it was essential. In this there is nothing of magic or of chance. It is one of the many illustrations of the fact that mechanical improvements keep pace with the advance of human civilization and of human needs.

The settlement of the west, described in the preceding chapter, would have been impossible upon a large scale had it not been for the development, about the same time, of means of transportation sufficient for the needs of the country. In similar fashion the later development of the nation, socially, politically, and industrially, was aided and in large measure made possible by the adequate and inexpensive carrying facilities with which the United States, throughout most of its history, has been provided. It is therefore not a matter for wonder that the interruption of railroad development in the second decade of the twentieth century, and the occasional paralysis of transportation facilities through strikes, fuel

shortage, or a sudden swelling in the volume of traffic, have brought serious problems which have affected every department of business and of everyday life.

Transportation in Colonial and Revolutionary Times.—

When we turn to the earliest periods of American history, we find that an elaborate system of transportation was not needed, and therefore not developed. We already have learned that the English colonies were planted along the coast, and that even when the War for Independence closed, the greater number of the people lived close to the Atlantic. Under these conditions, it is natural that the carrying trade of the period should have been conducted mainly by water. Communication between towns and states was principally by boats along the coast or on the rivers with which the eastern part of the United States is well supplied. Most of the important towns were located on the ocean, on bays, or on navigable streams.

Such traffic as was necessarily carried on by land was by means of bridle paths and crude roads. Over these primitive highways passengers and freight were carried slowly and not without inconvenience and danger. Travelers have left vivid accounts of the wretched condition of the roads in the colonial and early national period. A coach journey from Boston to New York lasted three days, with brief stops for sleep and refreshment. The trip from Boston to Philadelphia consumed nine days. Says McMaster:¹

Much of the delay in land traveling was caused by the wretched condition of the highways. On the best lines of communication the ruts were deep, the descents precipitous. Travelers by coach were often compelled to alight and assist the driver to tug the vehicle out of the slough. Out of Philadelphia a quagmire of black mud covered a long stretch

¹ History of the People of the United States, by John Bach McMaster, Vol. I, p. 52.

of road near the village of Rising Sun. There horses were often seen floundering in mud up to their bellies. On the New York road long lines of wagons were every day to be met with, drawn up near Logan's hill, while the wagoners unhitched their teams, to assist each other in pulling through the mire.

It is likely that the lack of sympathy and unity among the states in the Revolutionary and early constitutional era was due, at least in part, to the difficulty of transportation and the consequent infrequency of interstate travel.

Early Efforts to Improve Roads.—The first serious efforts to improve the highways came with the building of turnpikes, or toll roads. These usually were constructed by companies or individuals, who depended upon the tolls, or charges for the use of the roads, to reimburse them for their outlay. The first recorded turnpike was built in 1790. Within a few years these improved highways had been extended to the principal towns of the New England and middle Atlantic states. State aid often was granted to defray the cost of construction and upkeep.

While the turnpikes added greatly to the safety and convenience of land traffic, they made little if any reduction in the expense, for the tolls largely made up for the saving in time and horsepower. Most of the bulkier commodities produced in the country were barred from any but near-by markets, on account of the cost of transportation. It is estimated that "on the average it cost about \$10 a ton for every 100 miles to transport goods by land."² When we consider the relatively low value of the commodities themselves, in terms of money, it is easy to understand that few classes of goods could bear this freight charge.

² The Economic History of the United States, by Ernest Ludlow Bogart, p. 206.

In the meantime the migration to the west, which we observed in the preceding chapter, was bringing the need of better means of transportation forcibly to the attention of the public. An important impetus to the construction of roads was given in 1807 when Albert Gallatin made a "report on roads, canals, harbors and rivers," in which he proposed that Congress should expend about \$20,000,000 in a comprehensive system of internal improvements. Discussion of this report brought up the question of the extent to which Congress, under the Constitution, was authorized to expend government funds for public works; if, indeed, it was authorized to do so at all. This question was agitated intermittently for a number of years, at times becoming an issue in presidential campaigns. In spite of this constitutional doubt, the government constructed the Cumberland "national pike" from Cumberland, Maryland, to Vandalia, Illinois, which was completed in 1838 after the expenditure of more than \$4,000,000.

The extension of improved highways continued with the advance of settlement. In the meantime, other means of traffic had come into prominence, for the time seemingly lessening the need for wagon transportation. Highways became relatively less important in the nation's carrying system. It is an interesting example of the unvarying logic of economic development that road building again became of primary importance in the second and third decades of the twentieth century, after the advent of the automobile had created a fresh need for improved highways.

The Invention of the Steamboat.—The use of steam power furnishes an illustration of the fact that many of the most important inventions do not come in a single stage, or as the work of one man or even of one generation. In our study of the industrial development of England (See Chapter I, page 19) we learned that steam power had been used in

a rude way even before James Watt, about 1769, made his discoveries. In the same manner, men began to dream of the application of steam to the propulsion of boats many years before a practicable steamboat had been devised. In the United States, one Oliver Evans about the close of the Revolution began experimenting with steam-driven boats and wagons. Oddly enough, he turned his attention largely to the problem of power-driven wagons, thus touching upon a mechanical principle which was not to be utilized in a practical way until a century had passed. In 1804 he propelled a steam wagon through the streets of Philadelphia. More practical were his experiments with the use of steam for water traffic, as the result of which he finally drove a steamboat up the Schuylkill River, the power being applied by means of paddle wheels.

In the meantime John Fitch and James Rumsey, working independently of Evans and of each other, had attained some measures of success in steam propulsion of boats. Fitch had in fact operated a steamboat on the Delaware River in 1786, and had been granted patent rights, with a monopoly of steam traffic, by the states of Pennsylvania, Delaware, New York, and Virginia. Other inventors experimented along similar lines, but the practicability of steamboats as a means of commercial traffic remained in doubt.

It was left for Robert Fulton, in August, 1807, to demonstrate the practical aspect of steam navigation by driving the *Clermont*, a paddle-wheel craft, from New York to Albany in 32 hours. From that time the steamboat became an established aid to commerce and to the development of the country. Its general adoption was hindered by the granting by the New York legislature of a 20-year monopoly to Fulton and his partner, Robert Livingston, and by the later attempt to enforce a similar monopoly upon the Mississippi, but in 1824 the Supreme Court of the United States, in the case of *Gib-*

bons v. Ogden, held that the use of the rivers could not be monopolized. With steamboat transportation made available to all, its use spread rapidly.

Steamboat Transportation on the Ohio and the Mississippi.

—The invention of the steamboat came at a time opportune for the interests of the new west. Settlers in the Ohio and Mississippi valleys were provided with a rapid and relatively cheap and safe means of carrying their surplus products to New Orleans. Without it, the commercial development of the western states would have been delayed for many years. In 1816 it was estimated that the produce received at New Orleans was worth more than \$8,000,000, and that at least 80 per cent of this commerce originated on the upper Mississippi and the Ohio. By 1829 this total had grown to \$22,065,518, and by 1840 to \$49,763,825. Many steamers were built in the cities bordering the rivers, and river traffic became one of the most flourishing enterprises of the time. It is true that the unavoidable dangers of the river transportation, combined with the imperfect construction of the early vessels, resulted in many accidents. One of the most serious of these occurred in 1823, when a steamboat with some 200 passengers struck a snag in the Mississippi at night and went to the bottom in five minutes. Nevertheless boats were improved, pilots became more expert, and steam transportation increased more rapidly than ever.

From its adoption down to the present time, steam navigation, both on the ocean and on inland waters, has been among the cheapest and most satisfactory methods of transportation, particularly for heavy freight. Many a commercial center owes its upgrowth to the advantage it enjoys—or enjoyed at an earlier day—in the matter of lake or river transportation. In our own generation the opening of the Panama Canal has brought the Atlantic and the Pacific coast cities far nearer

together, commercially, than they were before the isthmus was severed. Railroad freight rates, almost from the beginning of railroad transportation, have been established to meet actual or possible water competition. A recent example of the economy of water transportation is furnished by the fact that a large steel corporation has found it profitable to carry iron ore all the way from South America, although its products come into competition with those of companies having their ore supplies close to their manufacturing plants.³ Another example of the importance of water transportation to the steel industry is furnished by the use of boats to carry ore from the Lake Superior region to the Chicago and Cleveland districts.

The Construction of Inland Canals.—Some years before the steamboat had come into general use, a beginning had been made toward providing artificial channels for water transportation. It is interesting to note that before the Revolutionary War, George Washington had mapped out the route for a canal connecting the Chesapeake River with the Ohio, and had predicted that at some time the Hudson River would be connected with Lake Erie by water. Before 1800 several canals had been constructed in various parts of the country.

Washington's prediction of a water route between Lake Erie and the Hudson was fulfilled by the construction of the Erie Canal, begun in 1817 and completed in eight years. This waterway, financed by the state of New York, cost \$7,602,000, a large sum for that day. But it paid for itself many times over by providing a convenient and cheap path for the growing commerce between the Great Lakes region and the Atlantic seaboard. Products from any district within a practicable distance from a lake port could be carried from Buffalo

³ This was the experience of the Bethlehem Steel Company during the World War and in the following years. It should not be understood, however, that this company secured its entire ore supply from South America.

to Albany on the canal, and thence to New York down the Hudson. Freight rates, previously so high as to be prohibitive in respect to the bulkier products, tumbled rapidly. Rates from Ohio to the coast in a few years fell to one-tenth of their former figures. The shipping of New York City increased at a rate which soon put New York at the head of the commercial centers of the United States. The commerce thus fostered became an important factor in the development of the north central states and in the encouragement of settlement in that district. Some historians have even said that the Erie Canal, by directing migration to the north central district rather than to the states south of the Ohio River, built up the resources and the population by means of which the nation resisted disunion in the Civil War.

The Era of Canal Building.—Stimulated by the success of the Erie Canal, the construction of inland waterways spread with unreasoning enthusiasm. Canal building became a mania, from the contagion of which few parts of the country escaped. One of the sounder projects was financed by the state of Pennsylvania, in the construction of a series of canals and portage railroads between Philadelphia and Pittsburgh. This route, which crossed the Alleghenies, cost more than \$10,000,000. It was completed in 1834, and was operated with success for many years. Other projects, however, were less wisely conceived. States and private corporations entered into a mad competition in spending money for internal improvements, and particularly for canals. Large debts were contracted, and some of them never were paid. It has been estimated that in less than twenty years, beginning with 1820, the various states incurred debts for public improvements aggregating more than \$110,000,000.

In the midst of this era of canal construction, the railroad, by providing a still better means of transportation, put an

end to the usefulness of the canal, except in a few localities. Many of the canals already constructed became unprofitable and soon fell into disuse. The panic of 1837 precipitated the collapse of the vast system of internal improvements which had grown up as a part of the inflation of the whole financial structure of the country. Private companies became bankrupt, and some states even repudiated their debts. Before financial conditions had recovered sufficiently to warrant a resumption of work on internal improvements, the railroad had become an established means of communication.

The Beginning of the Railroad Era.—The railroad has contributed more to the development of the United States than to that of any other country. The principle of drawing cars on tracks of parallel rails was utilized in England as early as the sixteenth century, and in 1814 George Stephenson constructed his first steam locomotive, which was installed on an English railway where it competed with horses as motive power. The Stockton and Darlington Railway, in England, was opened in 1825, the date usually given as that of the beginning of railway transportation in the modern sense.

The first regular railroad in the United States was begun in 1828, with the construction of the first few miles of the Baltimore and Ohio Railroad out of Baltimore. The first 13 miles was opened to traffic in 1830, and in the next year the line was completed to Frederick, a distance of 70 miles. In 1830 the United States had a total of 23 miles of railroad. By 1840 the mileage had increased to 2,818; by 1850, to 9,021; by 1860, to 30,626.

We are accustomed to think of a railroad as a track of iron (in recent times, steel) rails, over which cars are drawn by steam locomotives or by electricity. These conditions, however, were far from being universal on the early railroads of the United States. The tracks usually were of wooden beams,

upon which were nailed or bolted thin strips of iron. Although the steam locomotive had been proved practicable in England, it was not adopted immediately in the United States. The Baltimore and Ohio Railroad at first was operated with horses and sails as motive power. Attempts to use British-built locomotives were unsuccessful, on account of differences in physical conditions and in roadbed. Within a few years, however, American locomotives were being operated with a fair measure of success, and the development of the American railroad, with its far-reaching commercial and social results, was well on its way. Most of this development belongs to a period later than that now under consideration. It is sufficient for the present to note that, as the country grew and new regions became settled, the railroad followed close upon the heels of the pioneer, binding the country together with its bands of iron, and permitting the interchange of products between east and west and north and south. Without it, the development of the United States, in anything like the manner in which it actually took place, would have been impossible.

TOPICS FOR REVIEW AND DISCUSSION

1. What were the means of travel in colonial and revolutionary times? Why was land transportation developed slowly?
2. Why was there an increased interest in road building after the Revolutionary War?
3. Describe the early experiments in the United States with steam transportation by water.
4. What were the methods of transportation on the Ohio and Mississippi rivers before the introduction of the steamboat? (See also Chapter X.)
5. What were some of the effects of the opening of the Erie Canal?
6. Study in an encyclopedia or an American history the development of canals up to 1837; name some of the canals not mentioned in this chapter, and trace their routes on a map.
7. Describe the early railroad development in the United States.

8. Study in an encyclopedia or other reference work the life of Robert Fulton; report on his experiments with steamboats and his efforts to maintain a monopoly of steam navigation.

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NOTE: See also encyclopedia articles on railroads, canals, and steam navigation.

CHAPTER XII

TARIFF LEGISLATION, 1789 TO 1857

Sources of Government Revenue.—When Congress under the Constitution faced the task of raising money for the expenses of the new government and for the payment of the Revolutionary debts, three main sources of revenue seemed available. These were the sale of public lands, excise or internal revenue taxes, and customs duties upon imports. We have noted in Chapters IX and X some of the incidents connected with the sale of public lands. Excise taxes, such as revenue taxes upon tobacco and other articles, and the so-called “luxury” taxes, have been levied to a greater or less extent from the foundation of the government until the present day. Throughout most of the history of the United States, however, the main source of federal revenue has been the tariff upon imports. This circumstance, with the fact that it has furnished one of the most important and permanent of political issues, gives it more than a passing interest.

Protection and Free Trade.—Public finance in modern times has recognized two theories as to tariff or import duties. One is that of free trade, or the policy of permitting nations to exchange products without discrimination, in the belief that thus each nation will produce those things for which it is best adapted and buy the articles which are cheaper for it to purchase than to produce, and that this system will work for the benefit of all. Under this theory import duties, if levied at all, are imposed only for the revenue they will raise. The other theory is that of protection, or the policy of levying import duties with the deliberate purpose of putting burdens

upon foreign sellers which will make it difficult for them to compete with home producers, thus permitting the home producers to charge higher prices than otherwise might be set by unlimited competition.¹ Under this system, duties sometimes are set purposely at figures so high that they wholly or partially prohibit the importation of articles upon which they are levied, thus actually raising less revenue than would be produced by more moderate taxes.

With the economic and political arguments as to the relative merits of free trade and protection, and of high and low duties, we are not here mainly concerned. The student of industrial history, however, will come to recognize that the gradually increasing measure of protection has been an important factor in the upgrowth and diversification of American manufactures, that it has permitted greater profits and higher wages than otherwise could have been earned, and that for these advantages the consuming public has paid, to a greater or less extent, in higher prices of commodities.

The various tariff laws of the United States have combined the two purposes, revenue and protection, in proportion varying with the policy of Congress or of the party in power. Although at various times one of the major parties has favored free trade as an abstract principle, no Congress has attempted to introduce absolute free trade, or even a tariff solely for revenue. The protective idea, in greater or less prominence, always has been present.

The Tariff of 1789.—In the first session of the national House of Representatives, James Madison, afterward President of the United States, introduced a bill for raising revenue through duties on imports. Discussion of this bill brought

¹ The effect of protection upon prices has been a subject of dispute among politicians and economists, and, as a matter of fact, it varies with circumstances. Sometimes, for example, under a high protective tariff competition among domestic producers holds prices to a level as low as would prevail under a system of free trade. Few will deny, however, that in the long run a protective policy increases the prices of most commodities.

forth a good part of all the arguments that since have been used for and against the protective principle. Also, it disclosed that different sections of the country had clashing interests regarding the tariff, and that members of Congress were prone to consult the interests of their immediate constituents in preference to those of the country at large—in this respect not differing greatly from lawmakers of later generations. As finally passed, July 4, 1789, the bill, mainly a revenue measure, had certain protective features, and these were of the local or "special interest" nature which has characterized, at least in part, every tariff law enacted from that time to the present day.

A characteristic debate was that relating to duties on distilled liquors. Distillers in New England sought a high duty on Jamaica rum, with which their product came into competition, but a low tax, or none at all, upon molasses, which they used as a raw material. Advocates of temperance preferred a tax which would have discouraged the rum industry, and they were joined—oddly, as it might seem—by the western distillers of whiskey and brandy, who had no love for the New England rum makers. Friends of rum, however, mustered the greater support.

The growing iron industry was given moderate protection, as were manufactures of hemp and cotton. Coal, a product of Virginia, was placed on the protected list.

The duties laid in this first United States tariff were low, judged by the standards of the present generation. The average rates, specific and *ad valorem*² were little more than 8 per cent. A few articles of luxury were taxed at considerably higher rates. The tariff of 1789 was amended by raising the rates, as the needs for revenue dictated, but it was not changed radically in principle until after the war of 1812.

² A specific duty is one in which a specified tax is prescribed for an article regardless of its value. An *ad valorem* duty taxes an article by a certain percentage of its cost or selling price.

The Tariff of 1816.—The conclusion of peace with England in 1815 found the government in urgent need of additional revenue. It also found the American manufacturing industry which had been stimulated by the slight measure of protection already afforded, and yet more by the complete or partial stoppage of imports during the war, well started on the road to prosperity and little disposed to submit without protest to the unrestricted competition of foreign producers. When Congress again attacked the tariff problem, therefore, it was with ideas quite different from those which had actuated the law-makers of 1789.

The Revenue Act of April 17, 1816, has been considered the first deliberately protective tariff in American history. The textile industries were protected by duties of 25 per cent on imported cotton and woolen goods, with a provision that this rate was to be reduced to 20 per cent after June 30, 1819. Upon certain articles, including leather, paper, hats, wooden manufactures, and carriages, the rate was fixed at 30 per cent. Sugar was taxed 3 cents a pound.

The tariff of 1816, although its passage came after a long debate over the issue of protection, received general support. The southern opposition to the protective principle, which in the next forty years was to become a leading political issue and to serve as the entering wedge for the attempted severance of the union, as yet had not developed.

In 1818 the 25 per cent duty on woolen and cotton goods was extended to continue in effect until 1826, and protection was given to the iron industry.

The Tariff of 1824.—By 1824 factional and sectional lines were more tightly drawn, and the political battle over opposing tariff theories was on in earnest. In the south, for reasons which we shall observe in later chapters, manufactures had almost no development. The southern planters, who exported

cotton, rice, and tobacco to Europe, opposed any measure which might tend to interrupt this profitable trade. Moreover, the south devoted its energies mainly to the production of a few staples, and purchased other necessities and luxuries. A high tariff, therefore, by limiting competition and thereby raising the prices of these purchased articles, was considered to be against the interests of the southern states. New England, later to be a stronghold of protection, at that time followed the interests of its shippers rather than those of its struggling manufacturers, and favored low duties, Daniel Webster joining forces with the southern senators. On the other hand, the central and western parts of the country, where manufactures and allied interests were gaining in influence, were friendly to protection. Their spokesman was Henry Clay, whose acquaintance we already have made in connection with the second Bank of the United States. Clay and his supporters advocated what they called the "American system." This policy included government aid for internal improvements (see Chapter XI, page 115) and a high protective tariff for the benefit of American manufacturers.

Clay and the American system prevailed. The tariff of 1824 extended the protective principle. Under the new law, duties for revenue were laid upon such imports as silks, linens, spices, cutlery, and a long list of other articles, the importation of which was not considered detrimental to American producers. Higher duties, with protection as their object, were laid upon iron, glass, lead, hemp, cotton bagging, cotton cloth, wool, and woolen goods.³

The Harrisburg Convention and the Tariffs of 1828 and 1832.—The Protectionists were now in the saddle. Friends of the rapidly growing woolen industry took the lead in urging

³ For an interesting account of the debate upon this bill, student is referred to McMaster's *History of the People of the United States*, Vol. V, p. 231, and following pages.

yet higher tariff duties. In July, 1827, the "Harrisburg Convention," attended by high tariff advocates from various states, adopted a resolution petitioning Congress for a greater measure of protection for American industries. Partly in an effort to grant the petition of the Harrisburg Convention, Congress in 1828 passed a bill which in protective features went beyond any previous law, and in which the rates were higher than in any other tariff measure enacted before the Civil War. As a result of political manipulation, some features of the bill purposely were made obnoxious and irritating. By this time New England, where the manufacturing industry steadily was increasing in magnitude, joined the high tariff ranks and aided in passing this "tariff of abominations" over the energetic protest of the south. The southern sentiment was marshaled under the leadership of John C. Calhoun of South Carolina, then Vice-President under John Quincy Adams.

Even the friends of the "American system" considered that the tariff of 1828 had exceeded the bounds of prudence in its high protective features. In 1832 a new law was enacted, which generally reduced duties, particularly upon those commodities for which the south was dependent upon purchase from other sections of the country or from foreign nations. The duty on cotton goods was not changed, and that on woollens was raised to 50 per cent.

The concessions of the tariff of 1832 did not satisfy the free trade faction of the south, which was spurred on by Calhoun. The South Carolina statesman became the leader of a school of political thought which professed to believe that a state had the right to refuse to obey a law of Congress which endangered the state's interests. Acting upon this theory, South Carolina in November, 1832, called a state convention, which proceeded solemnly to declare the tariff acts of 1828 and 1832 null and void and not enforceable in South Carolina after February 1, 1833.

Jackson and the Nullifiers ; the Compromise Tariff of 1833.

—Andrew Jackson now was President. We have seen in our study of the second Bank of the United States his determination and fearlessness when once engaged in a contest. Although a southerner himself, and certainly no friend of Clay's "American system" faction, he was passionately devoted to the Union. Nullification and the whole theory of disunion he resisted with all his power. For a time it appeared that civil war would break out. Jackson's firmness, however, prevailed. Advocates of nullification, abashed at the magnitude of the tempest which they had raised, looked about for a means of dignified retreat.

This means of retreat was furnished in part by Henry Clay. Throughout his political career, Clay was an advocate of compromise, wherever compromise was possible, in preference to the facing of disagreeable issues. Now he formed a temporary alliance with Calhoun and planned a new tariff which would aid in extricating South Carolina from her dilemma. The result was the compromise tariff of 1833. Under this law, duties gradually were to be reduced until after 1842 none should be higher than 20 per cent. The terms of the compromise were carried out.

The student of history finds it fascinating, although perhaps not overly profitable, to speculate as to the possible outcome had this compromise not intervened to halt the nullification proceedings of Calhoun and his partizans. It is conceivable that a clear-cut decision between union and nullification, with Jackson in the presidential chair, would have crushed the growing spirit of disunion and made unnecessary the frightful sacrifices of thirty years later.

The Tariff of 1842 ; Tyler and the Whigs.—By 1842 the country had passed through the panic of 1837. Business depression and other causes had left the federal revenues at a

low ebb, and the need for additional receipts was urgent. In the meantime the Whig party had been organized under the leadership of Clay, and had become the rival of the Democracy in national politics. The Whigs in 1840 elected General William Henry Harrison to the presidency. Harrison, however, died within a month after his inauguration, and was succeeded by the Vice-President, John Tyler. Between Tyler and the leaders of his party there soon broke out a bitter quarrel, through which the Whigs lost much of the advantage which a sweeping victory at the polls had given them.

Congress in 1842 set itself to the task of building a new tariff which would provide the additional revenue needed by the government and at the same time restore the protective principle favored by the Whigs. In the new bill, the duties ranged from 25 to 40 per cent, with woolens—favored then as many times before and since—touching the maximum.

In the meantime, a bill had been passed, with Clay's support, by which proceeds from the sale of public lands were to be divided among the states. This bill contained a provision, probably inserted by members of the Calhoun faction, that this distribution should cease if at any time tariff duties were raised above 20 per cent. Tyler considered that this pledged the government not to enact a high tariff measure and at the same time continue the distribution of the funds derived from land sales. Accordingly he vetoed the tariff bill. Congress was forced, in order to secure the President's approval of its tariff, to relinquish the land receipt distribution.

The Tariff of 1846.—The tariff of 1842 continued without important modification until 1846. Meanwhile England had adopted the policy of free trade, and sentiment in favor of tariff reduction had spread extensively through the United States. James K. Polk, a Democrat, had been elected President in 1844. President Polk in his first message recom-

mended a reduction of tariff rates from the level of the Act of 1842. The new tariff of 1846 grouped all imports into a number of classes. Class A, which included brandy and spirits, bore a tax of 100 per cent. In the classes which included most of the principal imports, however, the rates ranged from 20 to 30 per cent, which in most cases represented substantial reductions from the law of 1842. The tariff of 1846 also initiated the policy of storing imported goods in government warehouses until the duties were paid.

The Tariff of 1857.—By 1857, after a long period of peace and in the midst of the business expansion which preceded the panic of that year, the revenue of the government had come to exceed its needs. Agitation for a lower tariff resulted in the enactment of the law of March 3, 1857, under which the general level of duties was lower than in any tariff act since 1816, the average being only about 19 per cent. Duties were lowered upon many important manufactures, the cheapest variety of wool was admitted free, and the free list of raw materials was considerably expanded. This tariff was continued in force without important change until the eve of the Civil War, when the urgent need for more revenue made revision imperative.

The Act of 1857 ended the first phase of tariff legislation. We have noted a gradual increase of duties and an increasing adoption of the protective principle until 1828, after which the tendency mainly was downward. This tendency was checked abruptly by the financial necessities of the Civil War. The tariff legislation of the war period, and of the following decades of American history, will be considered in later chapters.

* TOPICS FOR REVIEW AND DISCUSSION

1. What were the main sources of revenue available after the adoption of the Constitution? Explain each source.

2. What is free trade; protection; a tariff for revenue only?
3. Why did the southern states oppose high import duties?
4. Why did the protection sentiment in the north steadily increase between 1816 and 1828?
5. What do you understand by the "American system"?
6. Describe the principal tariff changes from 1789 to 1857.
7. Study in an encyclopedia or other reference work the life of John C. Calhoun; report on his theories of states' rights.

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- NOTE: The standard general histories of the United States treat of the different tariff acts covered in the foregoing chapter, and of the political conditions surrounding them.

CHAPTER XIII

FORTY YEARS OF PROGRESS IN MANUFACTURES

Beginning of American Manufacture.—The protective tariff legislation described in the preceding chapter was in part the cause, in part the result, of a steady growth of manufacturing in the United States. Manufactures undoubtedly would have developed without the tariff; in fact, the very influence of the advocates of protection in the early days of the nineteenth century shows that manufacturing industry already had grown to some proportions. On the other hand, none can doubt that the protective policy early adopted gave a powerful impetus to manufacturing, and resulted in a development at once more rapid and more imposing than otherwise would have been possible.

We already have observed, (see Chapters III and VII) the crude beginnings of manufacture in the colonial and early national periods. We learned that the renewed importation of English goods at the close of the Revolution brought severe competition to the little factories which had been established in the United States, and forced many of them to close. Somewhat similar results followed the War of 1812. Again British merchants flooded American markets with goods, at prices with which home manufacturers found it difficult and many times impossible to compete. By this time, however, American manufacturing industry was on a more substantial foundation than at the close of the Revolution, and the manufacturers were little disposed to yield to foreign competition without a struggle. They demanded a genuine measure of protection.

The Tariff Act of 1816 (see Chapter XII, page 126) ac-

cordingly afforded a considerable protection against this foreign competition. In three years, however, industry and trade suffered a period of depression caused by inflation, speculation, and unwise banking practices. This panic of 1819, as it is called, gave another set-back to the struggling manufacturing industry of the United States.

Manufactures Increase After 1820—Beginning soon after 1820 there was a steady, substantial growth of manufacturing industry. The industrial needs of a growing population spread over constantly larger areas, and the expanding foreign commerce of the nation created broader markets and thus encouraged production. The advocacy of higher protective duties by a part of the Republican party and later by the Whigs gave an added impetus. Altogether, the years from 1820 to the opening of the Civil War constituted a period of manufacturing progress which laid broad and firm foundations for the imposing industrial structure erected in later years of the nation's history.

Inventions and Manufacturing.—For this increase in manufacturing there were causes other than the expanding market and the protection afforded by a friendly tariff. Among the most potent of these were the mechanical inventions and discoveries for which Americans were coming to be famous. The dependence upon factory machinery modeled after that in use in England was not of long duration. Americans soon were themselves devising machines which aided industrial progress all over the world. We have observed (see Chapter VII, page 74) the widespread effects upon textile manufactures resulting from Whitney's invention of the cotton gin. Other inventions were of scarcely less importance.

In a country still predominantly agricultural, and with vast tracts of forest and prairie to be brought under the plow, it

was to be expected that some of the most useful mechanical progress should be in the construction of agricultural implements. This, in fact, is what happened. The crude method of threshing with a flail, or by the hoofs of horses driven over the mown grain, early attracted the attention of inventors, and a patent for a mechanical threshing device was granted in 1791. Improvements were made until in the thirties the machine was coming into general use. Before 1860 threshing machines were being driven by steam power.

The other agricultural process in which mechanical aids were of the greatest service was that of reaping grain. In the early days this was done with the sickle, the scythe, or the cradle. In 1835 a patent for a mechanical reaper was granted to Cyrus McCormick, and the important industry of manufacturing reaping machinery was founded. Here, also, successive improvements were made, which have continued down to the present day.

These inventions of agricultural implements enabled the steadily diminishing proportion of the population engaged in farming to feed a larger number of people and to feed them better, thus releasing a constantly larger part of the nation's manpower for manufactures and commerce. Then, the manufacture of the implements themselves became a profitable industry.

Other Mechanical Devices Aid Manufactures.—Other mechanical inventions, moreover, exerted almost if not quite as great effect upon manufactures as did the threshing machine and the reaper. One of the most important was the invention of the sewing machine, a patent for which was granted to Elias Howe in 1846. Although mechanical aids in sewing had been used in a rudimentary way for many years, both in Europe and in the United States, Howe generally is looked upon, and with justification, as the inventor of the sewing

machine as a practical device. The machine soon came into general use, both for domestic sewing and in factories. It became important in the tailoring industry and later in the manufacture of ready-made clothing. Principles similar to those of the sewing machine were adopted in devices for sewing leather, and thus were of importance in the manufacture of shoes and of harness.

Improvements in the printing press, by increasing the speed, cheapness, and perfection with which books, pamphlets, and newspapers could be turned out, gave an impetus to the publishing industry, while at the same time the manufacture of printing machinery grew steadily in importance.

Another invention which had a powerful influence upon the development of manufactures, in part directly and in part through its effect in facilitating all business and industry, was the magnetic telegraph. Some of the principles relating to electricity and magnetism had been known for years, and even the idea of transmitting intelligence by means of the electric current was not wholly new when Samuel F. B. Morse in 1843 was given a congressional grant of \$30,000 for the construction of a telegraph line from Washington to Baltimore. Just before the Civil War the first Atlantic cable was laid, although telegraphic communication across the oceans did not come into general use until some years later.

The general effect of the mechanical devices to which reference has been made, as well as of many others which both preceded and followed them, has been vastly to increase the output possible of achievement for a given amount of land and of labor. They have thus added to the total wealth and to the prosperity of communities and of individuals.

The Use of Coal and the Growing Importance of Steam Power.—Of scarcely less importance than that of the mechanical inventions were the general adoption of coal as fuel and

the increased use of steam power. These two developments went hand in hand. As the advantages of the steam engine in manufacture and in transportation became better understood, the need for a fuel more compact and more efficient than wood became manifest; on the other hand, the discovery of the advantages of coal over wood led to the wider adoption of steam power.

In the years before the beginning of the factory era, and with much of the country covered with forests which the pioneer farmer was at much pains to cut down, little need was felt for any fuel except wood. Deposits of bituminous coal were discovered in Virginia in 1701 and mined in a small way after 1750. In 1822 about 50,000 tons of coal were produced in Virginia. With the settlement of the western country, anthracite coal was discovered in Pennsylvania and bituminous coal was found in Ohio and Illinois. The existence of coal in Pennsylvania had, in fact, been known since the colonial period, but the use of anthracite did not attain considerable proportions until after 1820, partly on account of the difficulty of transporting it to eastern markets and partly on account of the prevalent belief that it would not burn.

With the increasing use of steam power the demand for coal steadily expanded. Another outlet for the product of the coal mines came with the introduction of coal gas for lighting, which began on a large scale in the late thirties. The iron industry provided another demand, and here the introduction of coal aided iron manufacture and coal production, while arresting the rapid demolition of the forests in the neighborhood of the blast furnaces. At somewhat the same time, the gradual disappearance of the forests in the more settled portions of the country built up a market for coal as a domestic fuel. By 1860 the annual output of coal was more than 14,000,000 tons. The development of coal mining upon a really important scale, however, came in the period following

the Civil War. It is interesting to note the close relation between the industrial development of the country and the increasing consumption of coal for manufacturing, transportation, and domestic purposes.

Reference has been made to the increasing use of steam power in manufacturing. Steam engines were introduced in the colonies just before the Revolution, and in the early national period their use was extended gradually in the eastern states. With the settlement of the west, the steam engine was taken into that region. It is recorded that steam power was in use in Cincinnati in 1814 and in St. Louis in 1819. Says one historian: ¹

In 1826 there were about twenty-five steam engines in the factories of Cincinnati and over thirty-five in Pittsburgh. Scattered throughout the agricultural regions small steam engines were coming into general use for milling purposes. An establishment could be put up at small expense with machinery obtained from Pittsburgh, Cincinnati or Louisville; the abundance of both coal and wood afforded cheap fuel. In Illinois in 1835 there were upwards of fifty mills employing steam power, about forty in Indiana and thirty-five in Missouri.

In addition to the direct use of steam power in manufacturing, its application to land and water transportation increased the facility of assembling fuel and raw materials for manufacturing, and of carrying finished products to distant markets, thus giving an additional impetus to the growth of factory industry.

Manufacturing in North and West.—Stimulated by the favorable conditions which we have been observing, manufactures sprang up rapidly in the period between 1820 and

¹ Economic Development of the United States, by Isaac Lippincott, p. 192.

the Civil War. The industry in the main was confined to the north and west. The southern states, turning their attention more and more exclusively to the culture of cotton, and with a labor force adapted only to the crudest processes, made little progress in manufactures. It has been estimated that in 1820 manufacturing occupied the labor of 200,000 persons and capital amounting to \$75,000,000. The census of 1850 showed a total capital of \$533,245,000, employees to the number of 957,059, and products valued at \$1,019,107,000. The corresponding figures for 1860 were \$1,009,856,000 in capital, 1,311,246 employees, and \$1,885,862,000 as the value of the product.

As the magnitude of manufacturing industry increased, the variety of products also grew larger. The most important were textiles, iron, and flour and meal. Among the others in which the output was considerable were sawed lumber; boots, shoes, and clothing; machinery, refined sugar, carriages, distilled and malt liquors, tobacco products, paper, soap, agricultural implements, and marble and stone products.

Textile Manufactures.—The manufacture of textile products, particularly cottons, which early took the lead among the nation's factory enterprises, has remained throughout American history one of the most important of industries. The increase of cotton manufacture following the invention of the cotton gin continued as new markets were developed and more raw material was available. The value of cotton manufactures, as reported by the federal census, was \$4,834,157 in 1820; \$22,534,815 in 1830; \$46,350,453 in 1840; \$61,869,184 in 1850; and \$115,681,774 in 1860. In the last named year, the capital invested was \$98,585,000 and the workers totaled 120,000.

The growth of the woolen industry was slower, being retarded by an insufficient supply of raw material and, in the

earlier years, by less favorable tariff protection than was accorded cotton. After the settlement of the Ohio Valley, wool raising spread to the regions of Ohio and Pennsylvania, and many of the woolen mills were established in those states. The greater part of the woolen manufacture, however, like that of cotton, was concentrated in New England.

The census figures show the value of woolen manufactured products as \$4,413,068 in 1820; \$14,528,166 in 1830; \$20,696,999 in 1840; \$48,608,779 in 1850; and \$73,454,000 in 1860.

Manufactures of silk, linen, and hemp were of much less importance than those of wool and cotton.

The Growth of the Iron Industry.—The development of manufacturing and of transportation largely increased the demand for iron. Iron manufacture, therefore, kept pace with the industrial progress of the country in the period between 1820 and 1860. The need for iron and iron products was anticipated in the discovery of deposits of iron ore, particularly those in the Lake Superior region, which were used commercially soon after 1850. In 1860 the ore output of Michigan amounted to 114,000 long tons, while that of Pennsylvania, the leading producing state, was 1,706,400 tons. In the same year Ohio produced 228,700 tons of iron ore; New York, 176,300 tons; New Jersey, 57,800 tons; Massachusetts, 25,000 tons; Connecticut, 20,700 tons.

The production of pig iron in the United States increased from 165,000 tons in 1830 to 286,900 tons in 1840; 563,700 in 1850, and 821,200 in 1860.

The greatest iron production was in Pennsylvania, where the industry had been greatly stimulated by the discovery that anthracite coal could be used as blast furnace fuel. The use of coke in the blast furnace began about 1850. The manufacture of steel, one of the most important of present-day

industries, had attained small proportions in the period under consideration.

TOPICS FOR REVIEW AND DISCUSSION

1. What were some of the causes of the growth of manufacturing after 1820?
2. Name some of the mechanical inventions which influenced the spread of manufacturing.
3. Describe the increasing use of coal and steam before 1860, and name some of the causes of the increase.
4. Why was manufacturing confined mostly to the north and west?
5. What were some of the causes of the development of iron manufacture?
6. Why did Pittsburgh become the center of the iron industry? (See also Chapter VII.)
7. Study in an encyclopedia or other reference work the life of Cyrus McCormick; report on his inventions of agricultural implements.

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- NOTE: See encyclopedia articles on manufactures, sewing machines, agricultural machinery, printing press, telegraph.

CHAPTER XIV

THE CONDITION OF AMERICAN LABOR BEFORE THE CIVIL WAR

Growing Importance of Industrial Labor.—With the growth of manufactures between 1820 and 1860, and the gradual transformation of the United States from a predominantly agricultural nation to one in which a constantly increasing number of the inhabitants were engaged in industry and trade, it is natural that we should find a steadily growing importance attached to the class known as industrial wage-earners. A "labor problem" emerged, and this labor problem, in one form or another, has been prominent down to the present day.

As factories were multiplied; as small shops grew into larger ones and then were combined into huge units for mass production; as large-scale industry mobilized the labor, the money, and the brains of thousands of men behind a single enterprise, the condition of the wage-earner and his relationship to his employer came to assume greater importance. Questions relating to labor bulked large in the eyes of the workmen themselves, of business managers, and of the public. It is necessary to become familiar with the facts of labor development if we are to comprehend the economic growth of the country.

Most of the problems of labor assumed acute form in periods later than that now under consideration. The beginnings of these problems, however, are to be found in the decades preceding the Civil War, and to them we shall now direct our attention. We shall have occasion in later chapters to consider the labor system of the south. For the present

we shall confine our observations to the free workman of the north and west.

Classifications of Labor and Tendencies of Unionism.—

In modern industry labor generally is classed as skilled and unskilled. In the former class are found the workmen in trades which require a considerable apprenticeship or other training; in the latter are the mass of workers of no particular trade, who do the manifold tasks generally known as "common labor." In recent years, with the spread of machine processes, there has developed a third class of semiskilled workmen, who, without mastering a trade in its entirety, have learned to operate one or more of the machines used.

Another classification groups all workmen into two divisions: organized and unorganized, or union and non-union. Union workers are those who have joined one or another of the associations formed for the benefit of labor, and who usually prefer to work under conditions secured by negotiation between the union and the employer. Non-union workers are those who do not belong to such associations.

Among union workers there are, in turn, subdivisions and classifications. The unions are variously organized and have different aims and different methods by which these aims are expected to be attained. Without attempting to go into the details of these differences, we can recognize a few broad distinctions.

First, as to the structural forms, or methods of organization of unions, we find that most of them can be grouped as either "trade unions" or "industrial unions." Trade unions are those which are intended to include all the workers in a particular trade, as carpenters or printers. Industrial unions are those which seek to enlist in their membership all the men working in a particular industry, whatever may be their work. An example of industrial unionism is furnished by the United

Mine Workers of America. This organization is intended to include all the men working in and around coal mines, not only the miners, but the mule drivers, tracklayers, car dumpers, and others. Besides trade unions and industrial unions, there are some organizations which seek to unite all workmen, of whatever trade and in whatever industry, and which may be designated as all-labor unions. The Industrial Workers of the World partake somewhat of this character.

Trade unions or industrial unions sometimes are grouped together in more or less closely merged organizations called "federations." The American Federation of Labor is an example of this form of organization.

Second, as to aims and methods, we find again two broad types. Some unions devote their efforts to making the best bargains they can with employers regarding wages, hours of labor, and working conditions, without attempting to change the fundamental systems of business. This form of activity is called "business unionism." It is the method employed by most of the older trade unions and that favored by the American Federation of Labor. The activities of other unions are classed as "uplift" or "revolutionary." These organizations have as their ultimate aim the overthrow of the entire "capitalistic" system under which some men own the tools and factories and other men work for wages. Sometimes they seek to found a system by which control of industry shall pass to the workmen themselves. At times this character of unionism is carried to an extreme at which it advocates the abolition of property rights altogether.¹

Collective Bargaining with Employers.—In their dealings with employers, many unions attempt to negotiate contracts

¹It should be remembered that the term "revolutionary" as here used refers to a system of thought or of philosophy, and does not necessarily imply a purpose to resort to violent means. For a close analysis of the structural forms and the aims of unionism, the reader is referred to "Trade Unionism in the United States," by Robert F. Hoxie.

covering wages, hours of work, and other conditions. These contracts may, or may not, include clauses which prevent any but union members being employed. As a result of the relationships, or lack of them, between unions and employers, we find at the present time four classes of establishments: the closed union shop, in which only union workmen are employed; the preferential union shop, in which the union is given the first chance to supply workers before non-members are hired; the open shop, in which union and non-union men are hired without discrimination; and the closed non-union shop, in which the employer refuses to give jobs to union members.

One other general fact regarding unionism should here be noted. In American labor history, unions have been strongest in times of prosperity, when work has been plentiful and workers relatively scarce. At such periods, unions rapidly have grown in membership, and have been able to negotiate favorable agreements with employers, on account of the brisk demand for labor. In times of business depression, on the other hand, when laborers have been numerous in comparison with the available jobs, unions have lost the advantages they enjoyed in times of prosperity. With work scarce and workers plenty, the laborers and their organizations have been at a disadvantage in bargaining with employers. Particularly in the earlier periods, times of business depression have resulted in the weakening of labor unions. Also, by giving the employer an unusual advantage in bargaining, they have tended to discourage the workers with this form of activity, and to cause them to turn their attention from industrial bargaining with employers and toward political and other non-industrial means of attempting to secure relief from adverse conditions.

Some of the general principles relating to the labor movement which have here been set forth apply more forcibly to conditions in the twentieth century than to those in the period

before the Civil War. In the earlier period, however, we find traces of practically every tendency which enters into labor problems of the present day.

Advance of Labor Movement after 1820.—We have had occasion to note the beginning of the union labor movement in the United States, which dates practically from the first years of the nineteenth century. (See Chapter VII, page 79.) Also we have observed (See Chapter X, page 103) that, particularly in the earlier periods of the nation's history, it was comparatively easy for the industrial worker, if dissatisfied with his conditions, to secure a piece of the abundant public land and become a farmer. This latter fact was important in connection with the union movement. The American workman, with a way of escape from unsatisfactory conditions always open, was less readily interested in a movement designed for the uplift of all the members of his trade, or even of all the working class, than otherwise he might have been. Partly for this reason the labor movement in the United States was of slow growth.

The first labor activities which attracted wide attention were political rather than industrial. Beginning about 1827, workmen all over the country joined in efforts to secure specific legislation supposed to be in the interest of labor. The aims of this early agitation included the ten-hour day, abolition of imprisonment for debt, restriction of child labor, abolition of the hiring out of convicts to contractors, free public education, exemption of wages and tools from confiscation for debt, and the right of the workmen to file liens on property if their wages were not paid. Most of these aims have since been attained.

The political agitation which thus began in the early career of the labor movement had, however, little immediate effect. We have noted the beginning of this agitation in Philadelphia,

as a result of a strike of carpenters. (See Chapter VII, page 80.) The movement spread rapidly. Workingmen's parties were organized in most of the principal cities, and labor publications became numerous. For some years the labor vote of Philadelphia was an important factor in local politics. There the Mechanics' Union of Trade Associations at the period of its greatest strength included 15 separate organizations. The Workingmen's Party also exerted political influence for a time in New York, Albany, Boston, and other centers, sometimes electing its candidates to local offices.

Within relatively few years, however, this political activity had for the most part disappeared, although it left its imprint upon the ideals of labor and the trend of social legislation for many years to come. In the prosperous period of the thirties the opportunities for direct gains through industrial action won labor leaders away from the political field, and we find a rapid increase in the number and strength of regular trades organizations, seeking to gain their purposes through negotiations with employers, or, failing in this method, through strikes. It is recorded that in 1836 there were 53 unions in Philadelphia, 52 in New York, 16 in Boston, and 23 in Baltimore. Unions in the cities of the Atlantic coast claimed a total membership of 300,000. About the same time, organizations became popular among the women workers who were employed in the factories in ever-increasing numbers. The various unions of the larger cities began to unite into central labor organizations for mutual support. In 1834, and again in 1835 and 1836, attempts were made to form a national federation, but these attempts failed.

The Panic of 1837 and the Labor Movement.—In the midst of this apparently triumphant progress of the labor movement came the panic of 1837. (See Chapter IX, page 98.) We already have noted the effect of this financial col-

lapse upon the business of the country. To the growing movement in favor of organized labor it dealt an almost crushing blow. With hundreds of thousands of laborers out of work, and many of them eager to earn food for their families upon whatever terms were offered, it was impossible for the union leaders to hold their organizations intact, much less to collect dues which might have been used in relieving distress. A few of the stronger unions were able to maintain their organizations; a much larger number disappeared altogether.

Following this panic came a period in which labor partially abandoned the policies of "business unionism" and turned again to political action. A new workingmen's party known as the Loco Focos, first formed in New York, attained considerable prominence and exerted an influence upon the established political parties of the day.

The increasing current of immigration in the late forties caused American workmen to fear the competition of Europeans for the limited number of jobs available, and to turn much of their activities in the direction of opposing the admission of immigrants. This early opposition to immigration took tangible form when, in 1847, the Native American party was organized, mainly by workingmen and their sympathizers. This party in its first years succeeded in electing some local officers and a few members of Congress. It even entered the presidential campaign of 1856.

About the same time that the Native American party ran its brief career, various beliefs of a socialistic nature gained supporters among workmen.

Recovery from the Effects of the Panic.—In the meantime, industry and finance had slowly dragged themselves out of the depression following the panic of 1837, and business had revived. Increased opportunity for employment enabled trade unions again to bargain effectively with the managers of in-

dustry. Accordingly, as in the prosperous days of the early thirties, labor turned away from political activities and devoted its efforts mainly through regular industrial channels. This phase of the labor movement reached its climax in the years between 1850 and 1857. In that period strikes reached numbers and importance exceeding those of any earlier time. It is estimated that in 1853 and 1854 there were about 400 strikes in the United States. Most of the organized crafts were on strike at one time or another during the fifties.

This era was ended by the panic of 1857. Again, as had occurred twenty years before, banks failed, business houses went to the wall, and labor suffered from widespread unemployment. Unions once more were forced to relax their demands and struggle against extinction. Many of them in fact disappeared. The opening of the Civil War, with its far-reaching effects upon industry and labor, interrupted the regular course of labor history before the period following the panic had opportunity to produce the familiar stages of political action, recovery, and resumption of business unionism.

Conditions of Workingmen before the Civil War.—We have observed in some detail the development of the union labor movement up to the Civil War. It must at the same time be remembered that during the years between 1820 and 1860 only a fraction of the population was engaged in industrial pursuits, and that of this fraction, only a minority were in labor organizations. Unorganized workers partook in large measure of the alternate prosperity and adversity which affected the unions. The condition of workers, organized and unorganized, gradually improved, with periodical back-sets resulting from business depressions.

This improvement was due in part to the activities of labor unions and in part to the growing ideas of democracy and the increasing importance of the "common people" in the political,

social, and industrial life of the nation. Even more, however, was it a result of the steadily increasing productiveness of industry, which, in turn, depended in large measure upon the extension of machine and power processes and the improvement of business organization. Had manufacturing and agricultural methods remained at a standstill between 1820 and 1860, and had the needs of a rapidly mounting population been met by no more than a stationary ratio of output to consumers, the condition of labor could have been improved little, if at all. The fact is that during the period under consideration the real wealth of the nation was growing by leaps and bounds. There was therefore more to divide, and the share falling to labor, as to other elements in society, was larger.

The first figures giving approximately accurate information as to the number of employees in productive industry are those of the census of 1850. In that year the number was reported as 957,059, and the aggregate of wages as \$236,755,464. Thus the average yearly income for each employee was about \$250. During the three decades before 1850 the early prejudice against the employment of women in factories gradually had been overcome, and many women had entered industry. In 1850, women made up about 23 per cent of all the employees in manufacturing plants. The employment of children, particularly in textile factories, had grown to large proportions.

Immigration and Its Effect upon Labor.—An important factor in the conditions of labor, particularly in the later years of the period under observation, was immigration. Even before 1830, many immigrants had entered the United States, most of them from England, Ireland, and Scotland. Between 1825 and 1830 the total number entering the country, according to reports of collectors of customs, was 87,140. It is

tolerably certain, however, that this figure is considerably below the actual number of immigrants.

During periods of prosperity, when laborers were scarce, these immigrants, most of whom belonged to the working classes, made a welcome addition to the working force of the country. In times of depression, however, they were looked upon by many as intruders who took some of the work needed by native Americans. We already have noted that some of the political activities of workingmen took the form of protest against immigration. Even before the formation of the Native American party, there had been agitation, in and out of Congress, for limitation of the entrance of foreigners into the United States.

About 1846 there began a flood of immigration surpassing anything of earlier years. In that year the potato crop in Ireland failed. Many Irish peasant families made the potato their principal article of food, and the failure of the crop brought famine in many districts. To escape this privation, and lured by the prospects of work and good wages in the United States, thousands of Irishmen in the next few years landed in the New World. Following the political agitations of 1848, moreover, which caused many persons of revolutionary ideas to leave Europe, came a large immigration of Germans, the largest movement up to that time from continental Europe.

Immigration, from that time to this, has been an important factor in American industrial, social, and political life. In our own day, serious problems have arisen as a result of the influx of many thousands of unskilled laborers from southern and eastern Europe, belonging to nationalities less easily assimilated and Americanized than the English, Irish, and Germans of earlier periods. These problems were reaching a seriously acute stage when the outbreak of the World War

shut off the tide of immigration. At the close of the war, Congress, largely at the instance of organized labor, enacted the emergency measure known as the "3 per cent law," which limited the yearly quota of new immigrants from any country to 3 per cent of the number of persons from that country already residing in the United States. An effect of this law was at once seen in a shortage of common labor, which raised up new problems, the solution of which is yet in the future.

In the era before the Civil War, in spite of some disadvantages growing out of an occasional oversupply of labor, it is likely that the immigration of foreign workmen was on the whole a benefit to the country. The immigrants of that period established themselves almost wholly in the industrial centers of the east and in the new agricultural districts of the west. They avoided the southern states, where slavery was throttling the normal development of free labor and establishing conditions with which even the poorest immigrant did not wish to compete.

TOPICS FOR REVIEW AND DISCUSSION

1. What is skilled labor? Unskilled labor? Semiskilled labor?
2. What is a trade union? An industrial union? An all-labor union?
3. What is business unionism? Revolutionary unionism?
4. What is a closed union shop? An open shop?
5. Trace the development of unions between 1827 and 1857.
6. What was the effect upon labor of immigration in the period before 1860?
7. What caused a sudden increase of immigration in the later forties?
8. What are the effects of prosperity and of business depression upon unionism? Explain the reasons for these effects.
9. Study in an encyclopedia or a history of the United States the career of the Loco Foco party; report upon its purposes and its political influence.

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CHAPTER XV

THE SOUTH, COTTON, AND SLAVERY

Industrial Backwardness of South.—While the growth of manufacturing and transportation was transforming the northern sections of the United States from their agricultural condition and bringing to maturity an industrial era, the south had developed almost no manufactures, and was carrying on its agricultural occupations by methods little improved from those of the colonial and Revolutionary periods. Its energies were bent to the production of one crop—cotton; its labor was provided through one system—slavery.

Let us consider, then, the way in which slavery became fastened upon the south, and the stages by which it grew to be a national menace, to be destroyed only by the Civil War.

Slavery at the Beginning of National History.—We already have noted (see Chapter IV, page 45) the introduction of negro slavery into the English settlements, and its moderate spread during the colonial era. By the time of the Revolution nearly every colony used slave labor to some extent. Partly on account of more favorable conditions of climate, partly because the ignorant and unskilled labor of Africans could be utilized to greatest advantage on the tobacco plantations of Virginia and the rice fields of the Carolinas, slavery even then was more prevalent in the south than in the middle and northern colonies. It must be remembered that at the first there was no widespread opposition to slavery upon grounds of morality or humanity. It is not unlikely that it would have become the "peculiar institution" of any section of the country which,

through a succession of circumstances such as are to be described in this and the following chapter, came to believe that it was necessary to its economic survival.

Such anti-slavery sentiment as there was in the years before the Revolution was perhaps as strong in one section of the country as in another. Even in the south, there were grave misgivings as to whether slavery might not be, after all, an economic blunder. The wasteful methods of agriculture which it fostered were seen to be rapidly wearing out the soil, and some economists even doubted whether the labor of a slave was worth as much as the cost of his maintenance and the interest on the sum he had cost his master.

About the time the Constitution was adopted, a sentiment for the gradual abolition of slavery had grown up throughout the country, and nowhere was it stronger than in Virginia. Says one writer: ¹ "In the first decade of our national history, anti-slavery sentiment was stronger in Virginia than in New England."

A Georgia congressman declared: "Not a man in Georgia but wishes there were no slaves; they are a curse to the country."

Before the Revolution, and in the first few years of independence, several states, some of them in the south, had enacted laws against the importation of slaves, and were looking forward to the gradual ending of slavery altogether. But before the first quarter of the nineteenth century had passed, the southern states, even those bordering the free territory to the north, had come to look upon slavery as an institution indispensable to their prosperity, and viewed with hostile eyes each attempt, not only to abolish it, but even to limit its spread. The cause of this swift change of sentiment was the growth of the cotton industry.

¹ Industrial History of the United States, by Katharine Coman.

Growth and Spread of Cotton Culture.—In studying the development of manufactures in the earlier national period (see Chapter VII, page 74) we observed that cotton was at first an unimportant product, even in the southern states, but that it came into prominence as a result of the invention of the cotton gin, which made its manufacture into cloth practicable by solving the problem of ridding the fiber of the seeds. Almost immediately cotton leaped into first importance among the staple crops of the south. Production advanced from 1,500,000 pounds in 1790, to 80,000,000 pounds in 1807. In the same period the price increased from 14½ cents a pound to 21½ cents. The growth of the textile industry in England created an active demand for raw cotton, and provided a steady and profitable export market. The predominance of cotton raising over all other industries of the south became more and more pronounced. By 1820 the crop reached a total of 160,000,000 pounds; by 1830, a total of 350,000,000 pounds.

This rapid development of an almost new industry, and an industry which depended largely upon hand labor, caused a quickly increasing demand for workers. At first white laborers were used in the cotton fields, but the supply was far from sufficient. Then it was that the institution of slavery was turned over to the cotton industry, and the supplying of slaves to work the huge cotton plantations became a profitable occupation. With cotton raising thus established upon a system of slave labor, such free labor as had been available was withdrawn, and the planter became wholly dependent upon slavery. The south, convinced that slavery was the very blood of its economic life, gave up all thought of abolition, and set about to protect its "peculiar institution" by every means in its power, resorting at last to secession and war.

In 1808 the slave trade—that is, the importation of slaves—was prohibited by federal statute. For some years after

that, however, the large profits to be made by smuggling negroes into the country, and the relatively insignificant punishment to be feared if the illegal traffic was discovered, caused many slave traders to embark in this enterprise. When finally in 1820 slave trading was put into the same class as piracy, with the death penalty prescribed in case of conviction, the outside source of the slave supply practically was stopped. After that, the cotton planters relied upon the natural increase in the number of negroes already in the country. Many negroes born in the border states were sold in the far south, to be used as field hands on cotton plantations. The census of 1810 had shown a total of 1,377,000 negroes, free and slave, in the United States. By 1830 the number of slaves had mounted to 2,009,043, and by 1860 to 3,953,760. Even this increase in numbers did not keep pace with the demand; as a consequence the price of slaves rose rapidly. In 1790 good field hands brought about \$200 each. In 1840 the average value of all the slaves in the cotton region was about \$500. By 1860 the average was about \$1,400, while not infrequently a slave brought \$2,000.

Degradation and Emigration of White Laborers.—As slavery thus became fastened upon the south, manual labor came to be looked upon as degrading for a white man. In the southern states there was scant opportunity for a man who lacked the capital to purchase land and slaves. The sentiment of the south regarding manual labor was stated by Calhoun in 1820 as follows:²

So degrading in my own section seems mere manual labor that were I, the most popular man in my district, to keep a white servant instead of a black one, I would be irretrievably ruined in character and influence.

² Quoted in John Quincy Adams' diary.

For these reasons the stream of immigration which was flowing strongly into the north and west, veered away from the southern states. The independent English, Irish, or German workman shunned the south as if it had been a region infested with pestilence. For the poorer class of native Americans in the south, the alternatives were to leave their homes for the free regions of the north and west, or to settle down into the despised conditions of "poor whites." It is significant that in 1860 there were 193,000 white natives of South Carolina living in other states, while only 277,000 remained in the state of their birth. Somewhat similar conditions prevailed in other southern states.

With the degradation or emigration of the free white workmen who under different conditions would have formed the middle class in the south, the population tended to be crystallized into three castes: first, the slave owners and the commercial and professional classes who largely were dependent upon slavery; second, the poor whites who eked out a meager existence upon the infertile land left over from the plantations or in the mountain valleys where slavery was unprofitable; third, the black slaves. Under wholly different circumstances we have seen the disasters resulting from the lack of a substantial middle class in the tragic history of Russia in the last years of the Czars and the years following the Bolshevist revolution.

Wasteful Farming under Plantation System.—Slave labor suffered from the fatal handicap that it could be used only in the rudest of occupations, and that under its régime even these occupations were carried on in the most primitive manner. This, in the main, is the reason why the south, with every other condition favorable, built no factories, not even those for the manufacturing of its own staple product, but

depended upon the north and upon Europe for its manufactured articles and even for much of its food supply. We have noted how in an earlier period (see Chapter III, page 36) the soil of the Virginia plantations was exhausted by the uninterrupted culture of tobacco. Much the same thing on a larger scale happened when cotton became the main crop in the southern states. With abundant and cheap labor and with vast areas of new land constantly being thrown open to settlement, little effort was made to conserve the soil by fertilization or by careful farming. The effort to bring ever greater expanses of fresh land under cultivation for cotton raising—and therefore under the slavery system—had important results which we shall observe in the next chapter.

Moreover, the management of the large plantations often was far from efficient, judged by present-day standards. The planters, although living on a scale of lavish expenditure which gave an appearance of wealth, seldom were really wealthy. Far too often for their own good, they gave their attention to politics or sports, leaving the management of their estates to hired overseers.

The Economic Effects of Slavery.—With the moral aspect of slavery the student of industrial history is not mainly concerned. As to its economic results, many and ingenious arguments have been advanced on both sides. Some have maintained that it was always unprofitable, even for the slave-owner. Others have held that from the standpoint of economic results it was justified. Probably the best conclusions that we can reach may be stated about as follows:

- I. For the community or state as a whole, slavery was an unmitigated evil. While it led to an appearance of prosperity through the cultivation and export of one staple crop, it discouraged all other industries. The south built no factories

and few railroads. Its rich mineral resources were undeveloped. Its soil did not raise food even for its own people. This lack of self-sustaining industries was a fatal weakness when the south attempted to maintain itself as a seceding nation.

Under slavery the independent middle class which forms the industrial backbone of most communities was, as we have seen, driven away or degraded. A small ruling class held control in business, in politics, and in society. This condition was of itself sufficient to stunt the development of the south and put it at a disadvantage in competition with the rapidly growing and industrial north, both in peace and in war.

It may seriously be asked whether slavery, if unchecked by war and emancipation, would not have worn itself out by bringing about the industrial and financial ruin of the districts which depended upon it.

2. For the "poor white" the slave system was a sentence to emigration or degradation. Even if his self-respect had allowed him to work in competition with the flogged black, the cheapness of labor would have made it difficult for him to support himself and his family upon any wages he could have earned. The poverty and shiftlessness of the poor white farmer became proverbial.

3. For the slave-owner himself, except as he was affected by the condition of the community as a whole, slavery probably was profitable, if the plantation was managed with reasonable efficiency and thrift. The food, clothes, and lodging of a slave cost little, even when we consider that the master had to support him in childhood and old age. This cheapness probably offset, for the moment, the laziness, the stupidity, and the dishonesty of the worker. Certain it is that the cotton raiser, confronted with conditions as they existed in the south, had no other means of cultivating his plantation than slave labor.

TOPICS FOR REVIEW AND DISCUSSION

1. Why was anti-slavery sentiment prevalent in the south in the first few years after the Revolution? Why did it disappear in later years?
2. What were some of the causes of the rapid development of the cotton industry?
3. Why did the growth of the cotton industry fasten the slavery system upon the south?
4. What was the condition of the poor white workman in the south?
5. Why did immigrants avoid the southern states?
6. Why was farming carried on by crude and wasteful methods under the slavery system?
7. Why did not the south build factories for the manufacture of its cotton into cloth?
8. Do you agree with the conclusions given on page 159 as to the economic effects of slavery? Do you disagree with any of these conclusions? If so, why?
9. What do you think would have been the ultimate outcome if the Civil War had been averted and slavery had been left undisturbed in the states in which it existed?

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- NOTE: See also encyclopedia articles on cotton, slavery.

CHAPTER XVI

SPREAD OF SLAVERY INTO THE WEST AND THE DRIFT INTO WAR

Economic, Political and Moral Conflicts.—The development of the cotton industry, the spread of slavery, and the resulting catastrophe of secession and civil war furnish one of the most impressive examples of the mutual reaction of economic and political history. Sectional interests, at first almost wholly economic, became in time the basis for the bitterest political rivalries thus far recorded in the annals of the nation. As years passed, a moral issue of steadily increasing intensity was added to the political and industrial strife. With the ultimate failure of compromise, the issues were fought out in a resort to arms, and in this conflict victory was decided largely by preponderance of material resources—that is, by economic superiority.

In the preceding chapter we traced the earlier stages of this clash of sectional interests. It was noted that the growing importance of cotton culture not only fastened slavery upon the old south, but caused its spread into the new sections of the southwest. We shall now observe more attentively this territorial expansion of the slavery system, together with its economic and political effects.

We already have studied (see Chapter X) the opening of the frontier regions west of the Appalachian Mountains. In this new territory the Ohio River was a natural as well as a legal boundary¹ between free and slave labor. Settlers in Ohio and other states north of the river came mainly from

¹ Ordinance of 1787, Chapter VI, page 63.

free states; slavery was interdicted not merely by law, but also by climate and industrial conditions, and by the previous habits of the immigrants. In the border states south of the Ohio, the population was drawn from both north and south, but the immigrants from Virginia and the Carolinas brought their slaves with them, and established the "peculiar institution" as a matter of course. In the region still farther south, the hold of slavery was even stronger.

The purchase of Louisiana (see Chapter X, page 109) brought into the national domain an area which probably most of the authors of the Ordinance of 1787 had not dreamed of as future United States territory. The question as to whether this new territory should be slave or free was certain to arise as soon as Americans began settling in large numbers within its borders.

Cotton Culture in the Southwest.—In the meantime had begun that increase in the magnitude and importance of cotton culture of which we learned in the preceding chapter. The southern planter, no less than the northern farmer and mechanic and the immigrant from Ireland or Germany, felt the urge toward the new west. In the case of the southerner, there was the additional incentive resulting from the rapid exhaustion of the soil of the older states, due to the wasteful methods of cultivation under a one-crop system and slave labor. Into Kentucky, Tennessee, Alabama, and Louisiana, therefore, the planters migrated with their cotton raising and their slaves.

When Whitney invented the cotton gin in 1794, such cotton as was produced in the United States was raised in South Carolina and Georgia. With increasing demand and better facilities, the industry spread to Virginia and North Carolina. By about 1810, Tennessee and Louisiana were growing cotton, and soon Mississippi and Alabama were added to the territory in which the dominant staple was raised. These four western

states were producing nearly half the cotton yield of the country by about 1830. Four or five years later, nearly two-thirds of the crop was raised in those states. In the meantime, cotton culture had spread to yet other southern districts. The extension of cotton raising caused rapid increase in the population, white and black, of the southwestern states and territories. The combined population of Alabama, Louisiana, and Mississippi was 116,908 in 1810; 355,756 in 1820; 660,677 in 1830; and 1,318,818 in 1840.

In this southwestern region, as had come to be the case in the older parts of the south, cotton was the leading—in some districts almost the only—product. Not even sufficient food was produced for the needs of the population. Much of the prosperity of the western states north of the Ohio River, especially after the advent of the steamboat on the Ohio and the Mississippi, was due to the demand for grain, flour, meat, clothing, livestock, and machinery in the south. New Orleans became not only an important shipping port for cotton, but the point of distribution for products of the Ohio River country destined for the entire southwest. We have already noted (Chapter XV, page 157) that the increasing demand for slaves in the far south and the southwest converted some of the older slave states into reservoirs from which negroes were sent into the cotton field.

Slavery in the New States; the Missouri Compromise.—

To understand the events which are to follow, we must turn our attention for a moment to some of the facts of political history. The Constitution, as finally drawn up and ratified, represented many compromises between the supposed interests of different sections of the country and of the larger and the smaller states. One of these compromises related to representation in Congress. It was provided that each state, whatever its population, should have two senators, while representation

in the House of Representatives should be based on population. As to the basis of representation in the House another compromise was made, by which slave population counted for three-fifths as much as free population—that is, a slave state was entitled to representation on the basis of its whole white population and three-fifths of its slaves.

At the beginning of national history, the representation of the north and the south in Congress was approximately equal. As the years passed, however, and the original northern states and the regions north of the Ohio River entered upon the industrial growth which we have been observing, the free states gained population more rapidly than did those of the south, and the north secured a majority in the House of Representatives. In the Senate, however, representation of the two sections continued to be equal, partly by design, and partly through the fact that new states naturally became qualified for admission from one section about as rapidly as from the other.

The anti-slavery provision of the Ordinance of 1787, applying to the territory from which the states of Ohio, Indiana, Illinois, Michigan, and Wisconsin were created, was not repeated in subsequent congressional enactments. The first of the new states admitted in the south were permitted to sanction slavery within their boundaries.

This was the situation when, in 1818, Missouri applied for admission as a slave state. Instantly the north took alarm. To grant the Missouri petition seemed equivalent to opening much of the Louisiana territory to slavery, and at the same time leaving the way open for control of the Senate by slave states. On the other hand, as sentiment in the north became crystallized against the further extension of slavery, the southern states, east and west, supported the Missouri application.

The Missouri controversy agitated Congress and the nation until 1821, when it was settled by the historic Missouri Com-

promise. By this agreement, Missouri was admitted as a slave state, while to maintain the balance of the sections in the Senate, the free state of Maine was taken into the union at the same time. It was further agreed that no more slave states should be created in the territory included in the Louisiana Purchase, farther north than Arkansas. Henry Clay was Speaker of the House of Representatives when the Missouri Compromise was adopted, and he was influential in bringing it to completion.

The Settlement of Texas; the Mexican War.—What is now the state of Texas once belonged to the original Spanish domain in North America, being considered a part of the province of Mexico. By a revolution which began in 1810 and ended about 1822, Mexico, including Texas, was set free from Spanish rule and became an independent republic. In the meantime many Americans, particularly in the south and southwest, had come to look upon Texas as a future addition to the United States. Many immigrants from the southern states had settled in Texas, and were rapidly extending their influence and their land holdings. Texas was foreseen as a future stronghold of slavery and cotton. The American settlers in Texas became embroiled in frequent quarrels with the Mexican government, one of which was the result of a decree abolishing slavery in Mexican territory. Finally Texas rose in revolt against Mexico, and in 1836 the Mexican general, Santa Anna, recognized the independence of the former province.

With the large American population of Texas, it was inevitable that the question of its annexation to the United States should come to the front. The subject aroused much discussion, both in the United States and in the new republic of Texas. In the former country, the question was involved with

the growing controversy over the extension of slavery, as it was realized that annexation would mean that Texas would apply for admission as one or several slave states.

The Texas question was carried into the presidential campaign of 1844, when the Democratic candidate, James K. Polk, was elected on a platform favoring annexation. Texas accordingly was annexed in 1845. The joint resolution adopted by Congress authorized the creation out of the former Texas republic of four additional states besides Texas, should Texas consent. The new states were to be admitted with or without slavery, as their citizens should desire, if they lay below the line of 36 degrees, 30 minutes of latitude, established by the Missouri Compromise as the northern limit of new slave states. If they lay above that line, slavery was to be prohibited. Early in Polk's administration Texas was admitted as a single state, with a constitution permitting slavery. By the admission of Texas and Florida in the south and Iowa and Wisconsin in the north, the balance of power in the Senate between free and slave states was left undisturbed.

The annexation of Texas led to war with Mexico (1846-1848). At the conclusion of this war the United States not only was confirmed in its possession of Texas, but gained additional territory out of which in time were formed the states of New Mexico and Arizona (with the exception of that part of New Mexico claimed as lying within the boundaries of the original Texas, and the territory acquired by the Gadsden purchase in 1853), California, Nevada, Utah, and a part of Colorado.

In the meantime the United States had in 1846 extinguished the British claim to the Oregon country, and entered into peaceable possession of that district, which later was divided into the states of Oregon, Washington, and Idaho, with portions of Montana and Wyoming.

New Possessions and New Problems.—Before the federal government had formulated plans for the organization of all this new territory, the discovery of gold in California (1848) forced the question upon Congress. The rush of gold-seekers gave California a population and an importance which warranted it in asking statehood. The California settlers were mainly from free states, and there appeared to be no economic advantage in slave labor. Sentiment in the proposed new state was adverse to slavery. How was the problem to be solved without disturbing the time-honored balance of power?

Moderate slavery sympathizers wished to extend the line of 36 degrees, 30 minutes to the Pacific, thus carrying the Missouri Compromise into the new territories. More radical advocates of slavery now began to insist that Congress had no right to prohibit slavery in any part of the new dominions. On the other hand, northern Abolitionists, as well as many people of more moderate views, wished slavery to be wholly prohibited in all the territory in question.

Clay, now nearing the end of his public life, had been returned to the Senate. He was the moving spirit in affecting a new temporizing measure, the Compromise of 1850. Under this agreement, California was admitted as a free state. Utah and New Mexico were organized as territories, with the provision that when they were admitted as states their own people should settle the question as to slavery. A stricter fugitive slave law was enacted, the slave trade was prohibited in the District of Columbia, and a boundary dispute between Texas and New Mexico was adjusted.²

² The political differences growing out of the acquisition of territory from Mexico, and the negotiations and debates preceding the adoption of the Compromise of 1850, are among the most interesting events of American history and among those most important in their relation to later occurrences. The student who desires to study these subjects in more detail than is within the province of an industrial history is referred to the first volume of Rhodes' "History of the United States from the Compromise of 1850," and to the fifth volume of Schouler's "History of the United States."

Renewal of the Slavery Controversy; Secession of the South.—Many earnest men of all factions believed that the Compromise of 1850 had settled for all time the problem of slavery extension into the new territory. As a matter of fact, however, the question was reopened within four years. In 1854 Congress passed the Kansas-Nebraska Act, leaving to the people of the Kansas and Nebraska territories the decision as to the introduction or prohibition of slavery. This act, it was claimed, was in the spirit of the Compromise of 1850, which had made similar provision with regard to New Mexico and Utah. Kansas and Nebraska, however, were within the territory supposed to have been included in the Missouri Compromise, and both lay north of the line which, in that compromise, separated freedom from slavery.

The Kansas-Nebraska Act led to civil disorders in the territory of Kansas, and was a direct forerunner of the Civil War. Tension between free-soil and slavery advocates increased from year to year, and when, in 1860, the Republican party was victorious at the polls and Abraham Lincoln was elected President, the greater part of the south formally withdrew from the union and set up a separate government. A four-year war was necessary to decide that the seceding government could not survive.

We have observed somewhat attentively the territorial controversies preceding the Civil War. These controversies and the causes which lay behind them were so intermingled with the economic and social development of the country that their consideration is essential to an understanding of industrial history. The growth of the cotton industry was the direct cause of the fastening of slavery upon the south; the spread of cotton and slavery into the southwest was an important contributing cause of the Mexican War; the territory secured as a result of the victory over Mexico further complicated the question of freedom or slavery in the new portions of the

United States; the controversies over this question led directly to secession and the Civil War.

TOPICS FOR REVIEW AND DISCUSSION

1. Why did the Ohio River become the boundary between free and slave territory?
2. What was the Missouri Compromise, and what were some of the questions that led to its adoption?
3. What was the controversy relating to the annexation of Texas, and how was it settled?
4. What was the Compromise of 1850, and what were the questions which it was expected to settle?
5. What was the Kansas-Nebraska Act?
6. Trace on a map the various acquisitions of territory concerned in the controversies described in this chapter.
7. Do you think the repeated compromises over the extension of slavery were in line with wise statesmanship? Why, or why not?
8. Study in an encyclopedia or other reference work the life of Stephen A. Douglas; report on his connection with the slavery controversies.

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NOTE: Encyclopedia articles on Missouri Compromise, Compromise of 1850, Kansas-Nebraska Act, and other topics referred to in the foregoing chapter. The standard general histories of the United States (for example, those of Rhodes, Schouler, and McMaster) discuss fully the territorial controversies leading up to the Civil War. These controversies have inspired a mass of fictional literature, some of which is valuable as giving an understanding of sectional aspirations and prejudices.

CHAPTER XVII

PAYING THE COST OF THE CIVIL WAR

A Dividing Point in Industrial History.—It was not by chance or in mere conformity to the conventional divisions of general history that in our survey of commercial, industrial, and labor conditions we paused at the period which marks the opening of the Civil War. That critical test of the nation's stability, while it marked the close of one epoch of American history and the opening of another, likewise set the end of one period of economic development and the beginning of a new industrial era which has continued down to the present time.

We have been studying some of the economic tendencies which were among the important causes of the Civil War. The growing supremacy of the north in population, wealth, and industrial progress, and the exclusive cultivation of cotton in large sections of the south, caused a gradual drifting apart of the commercial interests of the two sections. One of the first manifestations of this disunion of interests came in connection with tariff legislation. We have seen (Chapter XII, page 128) that at one time the strife over protection and free trade almost led to an attempt forcibly to disrupt the Union. Then came the increasing bitterness of the disagreement over the extension of slavery to the new states. This dispute, on the side of the south, was largely of an economic nature. Indisputably inferior to the north in growth of population, of commerce, and of manufacturing industry, the south staked its economic future upon cotton and slavery. When at last it became evident that the north, with its preponderance of population and wealth, was determined to set a limit beyond which human slavery could not go, the cotton states withdrew from

the Union, and were joined by some of the slaveholding states on the border.

The outcome of the struggling demonstrated that the south had misjudged the efficiency of its industrial system. The attempt of the Confederacy to subsist upon its own resources, after decades of specialization upon one staple, was a ghastly failure. The overwhelming resources of the north in men, in money, in shipping, and in commodities were the deciding factor in the war.

The Strain of Financing the War.—The cost of waging this war was staggering, in comparison with any expenditures which Americans ever before had been called upon to make. To the north alone, the expense averaged about \$2,000,000 a day. In the fiscal year ended June 30, 1865, the government spent nearly \$2,000,000,000. This sudden and enormous increase in expenditures came after a period when peace, interrupted only by the minor episode of the Mexican War, had reigned for nearly a half-century; when the prosperity which preceded the panic of 1857 had made the financial problems of the government easy, and when, as we have noted (Chapter XII, page 131) even the moderate import duties of the tariff of 1846 were reduced in 1857, largely because the revenues of the government exceeded its needs. The total receipts of the government for the fiscal year ended June 30, 1860, were only about \$81,000,000.

To meet the increasing financial demands, the government had recourse to four general methods. It increased the tariff rates by successive acts of Congress, thus adding to the income from import duties; it borrowed money directly, on bonds bearing varying rates of interest; it levied a whole swarm of internal revenue taxes; it issued Treasury notes which circulated as money. We shall consider each of these methods separately.

Tariff Legislation During the Civil War.—In the closing days of Buchanan's administration, March, 1861, Congress, faced by almost certain secession and probable civil war, passed the Morrill Tariff Act, by which duties generally were increased from 5 to 10 per cent over those of the law of 1857. In August and December of the same year the duties were still further increased. In every session of Congress from 1861 until the close of the war, tariff rates were advanced. By the Act of 1864, the average rate of duties was about 47 per cent, a sharp increase from the tariff of 1857, by which the duties had been fixed at about 19 per cent. These high import duties were levied primarily for raising revenue for the expenses of the war. They also served, however, further to establish the principle of protection for American products. As we shall see in later chapters, the policy of high tariff, established during the Civil War, was a national habit more easily acquired than broken.

From the standpoint of revenue, the high rates of the later war tariffs partially defeated their own purposes, by wholly stopping the importation of many commodities formerly purchased abroad. The report of the Treasurer of the United States for the fiscal year ended June 30, 1865, showed receipts from customs duties totaling only about \$85,000,000.

Internal Revenue Taxes.—In addition to increasing tariff rates, the government used its taxing power to levy a large and burdensome list of internal revenue taxes. By an act passed July 1, 1862, a new Division of Internal Revenue was created, with George S. Boutwell of Massachusetts as Commissioner. By this act, several times amended during the progress of the war, taxes were levied upon nearly all manufacturing and commerce, licenses were required to be taken out for the prosecution of various occupations, stamps were required on legal papers, and special taxes were collected

on articles of supposed luxury. The law also included an income tax, which, however, was later declared unconstitutional.

To enforce these internal revenue taxes and to collect the money derived from them, the states and territories were divided into districts, each with an assessor and a collector. The internal revenue taxes proved in the main a successful and efficient method of increasing the income of the government. By 1866, the annual revenue thus collected amounted to nearly \$311,000,000. Within a few years after the close of the war many of the internal revenue taxes had been entirely abolished and the rates on most of the others had been greatly reduced.

War Loans of the Government.—In 1860 the national debt was \$64,000,000, a moderate amount even for that time. Even before President Lincoln was inaugurated, in the spring of 1861, Congress sanctioned a new loan of \$25,000,000, to which another \$10,000,000 soon was added. After the war started, the national debt mounted swiftly to figures which frightened the government and the people. In 1865 it reached a total of about \$2,800,000,000.

In spite of this unprecedented increase in national indebtedness, the credit of the government was at no time seriously strained. The far-seeing statesmanship of Hamilton and of his contemporaries had built up a tradition that the United States government, so long as it endured, would pay its debts. This tradition stood the nation in good stead in its time of emergency. Banks and wealthy citizens subscribed liberally to the war loans, while farmers, tradesmen, and laborers bought bonds in amounts proportioned to their resources. Most of the loans were contracted at rates of about 6 per cent, with the interest payable in gold.

The Issue of Greenbacks.—The money raised by the methods we have just described, although it flowed into the Treasury in sums previously unknown in the history of the government, was insufficient. Before the war had lasted many months, the need of a speedy increase in the funds available for immediate use had pushed the government over the line which separates sound from unsound finance, and had caused the administration reluctantly to sanction an issue of Treasury notes, to be circulated as currency.

To understand the significance of this step, it is necessary to know something of the monetary conditions preceding the war. We have learned that the downfall of the second Bank of the United States, followed in a brief time by the panic of 1837 and the failure of many of the banks in which government funds had been deposited, led to the establishment of the Independent Treasury (see Chapter IX, page 100) in and out of which government receipts and disbursements flowed in the form of gold and silver coin. This was the situation when the war broke out. No government paper money was in circulation, but, in addition to the minted coin of the United States, notes of state and local banks passed freely as currency.

Before the close of 1861, the government and the banks had suspended specie payment, that is, had ceased to pay their obligations in coin. This was brought about by several causes, among which were the fact that the supply of coin in the country was thought to be insufficient for the swelling demand for money, and the fact that in the first war loan the strongest banks had strained their reserves of gold to supply the needs of the government. With specie payment suspended, gold coin as a commodity brought in the open market more than its face value. Gold thus was purchased at a premium, sometimes by speculators, sometimes by merchants who had to settle accounts with foreign creditors, sometimes by frightened

individuals or corporations who hoarded it against a possible day of government bankruptcy.

The premium on gold—or at any rate its value in relation to paper money, which is not always exactly the same thing, since the value of the paper money may decline for reasons of its own—was increased by the issuance of the Treasury notes above referred to. By an act of February 25, 1862, Congress authorized the national Treasury to issue notes to the extent of \$150,000,000, secured by the credit of the government but bearing no interest and with no definite time set for redemption. This was in itself a financial expedient of doubtful safety, since it put government obligations into the circulation and thus acted as a forced loan upon the whole population. The government went over entirely into the domain of unsound finance, however, when it not only paid many of its debts with its own notes, but provided by statute that the new currency should be legal tender—that is, that it must be accepted by creditors—for all debts, public and private, except duties on imports and interest on the public debt.

By the Act of February 25, 1862, and by subsequent acts passed between that date and the close of the war, the government authorized a total of \$450,000,000 of these non-interest-bearing legal tender notes. The denomination of the smallest bills was lowered from \$10 to \$5 and then to \$1, and later provision was made for fractional paper currency, down to the value of 3 cents. Thus, through the already existing scarcity of coin, and through the premium on gold and silver, metallic money almost wholly disappeared from circulation, and the country transacted its business, public and private, in notes of the Treasury and of the banks.

Thus came the "greenbacks," which, while they served a useful purpose in furnishing the government with an available supply of money in a time of urgent need, brought with them evils which largely offset their advantages.

Depreciation of Treasury Notes.—We already have learned (Chapter V, page 56) that paper money, unsecured by gold or silver provided for its redemption, is likely to decline in purchasing power. The extent of this decline depends upon two main factors: first, the degree of certainty, or uncertainty, that the issuing government or bank will redeem its pledges; second, the degree, if at all, by which the amount of money in circulation exceeds the needs of the business community. The credit of the federal government during the Civil War was not seriously impaired. The United States throughout the struggle was able to borrow freely, at reasonable rates of interest. The volume of currency was limited by Congress and the Treasury with a fair degree of wisdom. Therefore the greenbacks did not repeat the history of the Continental currency of the Revolution. Their depreciation, while severe, was not ruinous. At the lowest, they touched a value of 39 cents on the dollar, as compared with gold, and it must be remembered that at the same time gold was at a premium as a commodity. At the end of 1865, the gold value of the greenback dollar was 68 cents.

This depreciation of the currency, relatively moderate as it was, caused a sharp increase in prices of commodities, and corresponding hardship to those whose incomes were measured rigidly in dollars, without regard to the purchasing power of the money in which they were received. Average prices, considered on a basis of 100 in 1860, stood at more than 216 in 1865.¹ Thus the cost of the war, for the government and for private citizens, was increased by many millions of dollars.

War Finance in the South.—If the financial problems of the United States government were serious, those of the south-

¹ Figures quoted in Aldrich "Report on Wholesale Wages, Prices and Transportation." Senate report No. 1394, Finance committee, 52nd Congress, second session.

ern Confederacy were overwhelming. Already at a disadvantage, industrially, before the war, and with its ports closed by blockade soon after hostilities began, the government of Jefferson Davis was, almost from first to last, in desperate financial straits. The credit of the Confederacy was none too good in the most hopeful periods of the rebellion; toward the end it had almost vanished. Nevertheless, the government borrowed, at home and abroad, as it could, and its debt at the end of the war amounted to about \$2,000,000,000. Gold and silver coin disappeared from circulation as in the north, and the Confederate government issued paper currency, which soon began a precipitate drop in value. Near the close of the war the value of this currency, in comparison with gold was 1 to 50 or 60; that is, it took \$50 or \$60 in Confederate currency to buy a gold dollar. With the defeat of the south, its currency became worthless. Altogether, the Confederacy issued nearly \$1,000,000,000 in paper money.

As Confederate currency declined in value, prices of the necessities of life rose to unprecedented heights. Toward the end of the war many people avoided the use of money altogether, and traded one commodity for another.

TOPICS FOR REVIEW AND DISCUSSION

1. What was the average daily cost of carrying on the Civil War, and what were the methods used by the government to secure revenue?
2. What were some of the classes of internal revenue taxes levied?
3. What were the greenbacks and why were they issued? Why did their value depreciate?
4. Why did gold and silver coin disappear from circulation during the war?
5. What were the methods used by the Confederacy to pay the cost of the war?
6. Is it true that an oversupply of good money causes an increase in the prices of commodities?

7. Why did Confederate currency depreciate more than that of the United States government?

8. Study in an encyclopedia or other reference work the life of Salmon P. Chase; report on his services as Secretary of the Treasury in Lincoln's cabinet.

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CHAPTER XVIII

BUSINESS AND LABOR DURING THE CIVIL WAR

Interference with Fixed Courses of Development.—

Natural science teaches that the orderly march of organic evolution has sometimes been interrupted, and its whole future direction changed, by some physical event which in its origin is wholly unconnected with the development of organic life. Thus, some millions of years ago, the gradual changes of uncounted eras had brought forth upon the earth a race of giant reptiles, which then represented the high point in the development of species. But the rulership of the earth was not to be given over to the descendants of the dinosaur. Through some outside cause—scientists surmise that it may have been a fresh outbreak of volcanic activity in the slowly cooling crust of the earth—these gigantic animals disappeared. The leadership in the evolutionary progress passed to other—and at the time seemingly feebler—branches of the animal kingdom.

Somewhat similar have been the effects of external events upon the development of industry. As in the animal kingdom, so in economics, we search in vain for an uninterrupted march of evolution. An apparently predestined course may be diverted or even reversed by conditions arising in fields unrelated to business affairs.

One of the conditions most profoundly affecting economic development is war. It is true, as we have had occasion repeatedly to observe in our study, that beneath the political pretexts for war, deep economic causes often are at work. But it is equally true that the events of war in turn exert profound effects upon industry. Throughout modern history

every important conflict has been followed by a train of economic results. This has been the case particularly in connection with the World War. That conflict, shaking the very foundations of national and international trade and finance, brought economic changes the magnitude of which, almost five years after the close of hostilities, cannot even yet be measured.

The student of industrial history therefore should expect to find that a conflict like the Civil War would exert an important influence upon industry and trade, upon labor, and upon the lives of the people. With commerce between the north and the south suddenly cut off, with an unprecedented demand for some products and with the market for others wholly or partly gone; with a large portion of the manpower of each section withdrawn from productive work and put into the armies; with southern commerce throttled by a blockade and with northern vessels imperiled from the Confederate privateers which infested the seas, it was inevitable that few conditions of life should remain unchanged. Some of the changes were temporary, and passed with the ending of the struggle which brought them into being; the results of others we shall be able to trace down to the present day.

Business Conditions in the North.—In the northern states an early effect of the war was felt in a series of business failures and bankruptcies, particularly of firms and individuals which had carried on extensive traffic with the south. By an act of the first Confederate Congress, in 1861, southern debtors were forbidden to pay their accounts to northern creditors. Thus many business men in the north, unable to collect the money due them from southern purchasers, were forced into bankruptcy. After the first year of the war, however, most of the firms whose business connections with the south had been too close to withstand the strain, already had

failed, gone out of business or turned their attention to other lines of trade, and bankruptcies from this cause mostly ceased.

The foreign commerce of the north was seriously affected. The war tariffs, with their soaring duties upon imports, discouraged international trade. Foreign merchants could not afford to buy products in the United States when a tariff wall shut out the goods which they would have sent in return. This was a principle which has been driven home to the people of the United States many times in later years.

Then, almost at the start of the war a swarm of Confederate privateers was launched in the Atlantic to prey upon the commerce of the north.¹ The activities of these vessels were successful to an extent which added seriously to the risks of shipping and further reduced foreign trade. American shipping engaged in foreign commerce from the port of New York in 1865 was less than one-half what it had been in 1861.

By the time the war ended, American supremacy in the ocean-carrying trade had definitely been lost. Other nations, and particularly Great Britain, had stepped into leading places from which they were not displaced. We shall see that the opening of the World War found the United States deplorably lacking in merchant marine, and under the necessity of taking measures artificially to build up the needed facilities for shipping.

Manufacturing in the North.—We have observed in previous chapters the growth of manufactures up to the year 1860. The war, with its seemingly insatiable demands for

¹ A privateer is a privately owned vessel, commissioned by a belligerent government to destroy the commerce of an enemy. This method of conducting naval warfare, once popular and in good repute, has practically been done away with. Many of the Confederate privateers were built in European ports, and never touched at a port of the southern states. The encouragement given to this activity by European nations, particularly by England and France, led to serious ill-feeling between the governments of those nations and that of the United States. Some of the ships in question, although in effect privateers, were commissioned as regular naval vessels.

clothing, food supplies, weapons, railroad and telegraph equipment and other necessities, gave a powerful impetus to manufacturing industry. The protective features of the war tariff acts, by further limiting foreign competition, gave added encouragement to American manufactures. Political and other considerations brought it about that this encouragement was not withdrawn, except partially and temporarily, in the period that has elapsed down to our own time.

The growth of manufactures during the war period can be shown to some extent by reference to statistics for the ten-year period from 1860 to 1870. In 1860 the capital in manufacturing was \$1,009,885,715; in 1870 it was \$2,118,208,769. During the same period the number of employees had increased from 1,311,246 to 2,053,996, and the value of the output from \$1,885,861,676 to \$4,232,325,442.

Agriculture in the North.—While the demands of the war encouraged manufactures, similar demands stimulated agriculture to a greater productiveness than in any former era in American history. Men and animals employed in war activities had to be fed, and the farms of the nation were called upon to produce food in quantities never before raised. To meet this demand, the farmers were aided by the new agricultural machinery just coming into general use (see Chapter XIII, page 135), by means of which the land was enabled to produce more crops with fewer men.²

Agriculture was encouraged further by the enactment in 1861 and 1862 of three important national laws. One was

² This new development in agriculture, taken in connection with the figures on manufactures quoted in the preceding paragraph, illustrates a fundamental truth of industry. A shortage of human labor, or a considerable rise in the level of wages, serves as an incentive to the adoption of changed methods or the greater use of machinery, by which the ratio of the number of workers to the amount of invested capital and the value of the output decreases. This, in turn, by increasing the total amount of the goods to be shared among the population, adds to the wealth available for distribution to both labor and capital. It is largely for this reason that the economic conditions of workmen have steadily improved with the advance of industrial productiveness. Conversely, attempts by labor to improve its own condition by restricting output, while they may be successful superficially and for a time, are certain in the end to recoil upon the workers themselves.

the Homestead Act, which gave public land free to actual settlers; one created the Department of Agriculture, and the third was a law granting tracts of public lands to states for the support of agricultural colleges.

Agriculture in the South.—The Agricultural system of the south before the war has already been sufficiently observed. We have noted the tendency to the exclusive cultivation of cotton, as a result of which many large sections did not even raise food for the support of their own populations. This agricultural system was a serious handicap to the south after the war began. Cotton could not be exported, on account of the blockade of southern ports by the Union navy, and the south had not developed textile factories to any considerable extent. As a result, cotton was piled up, to rot or be destroyed by invading armies, and the cotton planters were ruined. At the same time, the stoppage of trade with Europe and with the north created a serious shortage of food supplies. Tardily then, and at the spur of necessity, the south began the greater cultivation of food crops, and had made some progress before the close of the war.

Manufactures in the South.—As we have noted, the south had developed few factories previous to the war. The cotton states depended upon trade with the north and with Europe to supply them with manufactured goods in exchange for their one staple. With these sources of supply cut off by the war, the Confederacy was thrown upon its own resources. Faced with a shortage of all manufactured goods, and with the abnormal demands of a newly levied army to be met, the south made energetic efforts to build up manufacturing establishments that would fill the needs. Factories were erected, and the manufacture of shoes, clothing, guns, artillery and ammunition, lamps, glass, steam engines, machinery, and other

articles was begun. The genuine factory era in the south, however, was not to come for another generation.

Business Conditions in the South.—Business conditions in the south during the war were such as might have been expected. The collapse of the cotton industry, the northern blockade, and the demoralization of the currency had a paralyzing effect upon all trading activities. Especially toward the end of the conflict, when the downfall of the Confederacy was imminent, business, in the ordinary sense of the term, practically was at a standstill. There was still some speculation, especially in foods and other articles for which there was a famine demand, but legitimate business was prostrate.

Conditions were made worse by the likelihood that negroes would be set free in the event of a Union triumph, and that the billions of dollars of investment in slaves would be wiped out. At the close of the war this actually happened. In anticipation of it the value of slave property declined precipitately as the ultimate defeat of the Confederacy became more certain.

As a result of the abolition of slavery, the destruction of the cotton industry, and the depreciation in the value of Confederate bonds and currency, the well-to-do citizens of the south generally were impoverished at the end of the war, while those who had been poor found themselves destitute.

Labor During the War Period.—In discussing labor conditions during the war, we may confine our observations to the north. We have seen (Chapter XIV, page 149) that the panic of 1857 caused widespread unemployment and gave a setback to the trade union movement which had been making rapid gains since the recovery from the business depression of twenty years before.

The opening of the war, with the consequent shortage of labor, as a result both of the expansion of industry and the

withdrawal of many men to fill the army, provided abundance of employment. The expanded factories were calling for men and the worker who did not enter military service had little difficulty in securing and keeping a job. Wages, it is true, did not advance in proportion to the rise in the cost of living. The need for higher wages to meet increased living expenses, together with the opportunities created by a relative shortage of labor, gave trades unions a decided advantage in dealing with employers. Many new unions were started, the old ones were strengthened, and demands for higher wages and improved working conditions began to meet with success. Particularly from 1863 until after the close of the war, unionism was active as never before. It is recorded that from 1863 to 1866 ten important trades formed national organizations. By the close of the decade, at least 32 national trade unions were in existence. More than 100 labor publications were being printed in the interest of this expanding union movement.

The increase in money wages, while considerable, did not keep pace with the depreciation of the currency and the rise in the cost of commodities. Wages, figured in terms of money, rose somewhat more than 50 per cent between 1860 and 1866. In terms of their purchasing power, however, they were worth in the last named year only 79 per cent of their pre-war value.³

A decided discouragement to the American labor movement was furnished by Congress, when, in 1864, it passed the Alien Contract Immigration Law. Under this law, employers were permitted to import laborers under contracts which bound these immigrants to work out their passage money. This law resulted in a distinct increase in immigration, and labor complained bitterly of the forced competition with Europeans unused to American standards of wages and living.

³ Estimates from Aldrich "Report on Wholesale Wages, Prices and Transportation." Senate report No. 1394, Finance Committee, 52nd Congress, second session.

After some years labor forced a repeal of the law and the adoption by the government of a policy of sternly repressing contract labor.

All things considered, the war gave an important impetus to the American labor movement. Labor was to reach its greatest activity and power, however, at somewhat later periods.

Speculation in Gold and Commodities.—Expansion and inflation, whether the results of war or of other causes, are likely to bring periods of reckless speculation. Conditions which make the volume of currency—or the volume of available credit, which in this respect is not far from the same thing—greater than is required for the conduct of the business of the community, result in rising prices and in an artificially stimulated demand for products. It is, in fact, a demonstration of the workings of the law of supply and demand, which is as invariable when applied to money as when applied to commodities. When the community at large finds itself in possession of more currency or credit than it requires for its everyday necessities, it casts about for something upon which to spend this unaccustomed wealth. This creates an enhanced demand for goods—particularly for luxuries. At the same time, the changing ratio of the amount of money or credit to the amount of available commodities diminishes the purchasing power of money—again through the operation of the law of supply and demand—and prices rise. Rising prices, in turn, become a further stimulus to trade, as people see opportunities, by buying on a rising market, to increase their profits. At the same time that these influences are at work, the diminishing value of money serves as an encouragement to borrowing, the borrower believing that he can repay his loans in money of less purchasing power than that which he borrowed. This encourages business expansion and even speculation,

largely by means of borrowed funds. In our study of panics, we have had occasion to observe the results of these conditions. In a later chapter, we shall see that the price of war-time and post-war expansion was paid in 1873 and the following years. Events similar in principle took place in 1920 and 1921.

In the Civil War period, speculation reached its greatest proportions near the close of the conflict. It was stimulated by a rapid development of industry, a cheap currency, and a scarcity of gold. All classes were infected with the mania for speculation. Of this period, Schouler says:⁴

Union bondholders, whose interest coupons were cashed at the sub-treasury as they stood in long line, would hasten to the broker and sell the gold from their wallets at its current premium. Northern banks, while arranging to convert their business from the state to the national system, sold gold in immense quantities; and the profits and labors of middlemen in all such transactions were enormous. When speculation reached its height in stocks and specie, all Wall street went wild; women pawned their diamonds, and clergymen and teachers staked their modest salaries. . . . It was not until April, 1864, when Secretary Chase, by selling the surplus metal in the treasury for greenbacks, created an unexpected money panic which overwhelmed thousands of unlucky operators, that gold gambling received a heavy blow.

The blow dealt by the Secretary of the Treasury was of temporary effect. In the summer of the same year, gold reached its highest war price, being quoted as high as 285 in terms of currency; that is, it took \$285 in greenbacks to buy \$100 in gold coin.

The National Banking System.—One other economic development of the Civil War period remains to be noted. Since the downfall of the second Bank of the United States and the

⁴ History of the United States, by James Schouler, Vol. VI, p. 333.

establishment of the independent national Treasury (see Chapter IX, page 100), there had been no official connection between the government and the banking power. The financial emergencies of the war made it necessary for the banks to mobilize their resources in support of the government. Before the conflict ended, thinking men of all parties came to believe that the divorce of banking and government had been too absolute. By an Act of February 25, 1863, a new system of banking under federal authority was put into effect, carrying with it authorization of a new form of paper money. By the provisions of this act, banks were permitted to obtain federal charters and to operate under government, not state or local, control. Such banks were required to purchase United States bonds and to deposit them with the government. They were then allowed to issue notes in sums up to 90 per cent of the value of their holdings of government bonds. Notes of state and local banks were forced out of circulation through a 10 per cent tax levied upon them by a subsequent act of Congress.

This national banking system was a distinct advance over the policy in effect from 1836 until 1863. Its defects were to become manifest in later years, and to lead to the establishment of the federal reserve system. The methods prescribed by the Act of February 25, 1863, however, with slight changes, survived and functioned with a fair degree of satisfaction for almost a half-century.

TOPICS FOR REVIEW AND DISCUSSION

1. What was the effect upon domestic and foreign trade in the north, exerted by the war?
2. What was the effect of the war upon northern manufacturing; agriculture?
3. Describe business conditions in the south during the war; manufactures; agriculture.
4. What was the progress of the labor movement during the war period?

5. What were the main features of the National Bank Act of 1863?
6. How did the establishment of the national bank system affect currency?
7. Do you think the national banking system established in 1863 was better than the earlier Bank of the United States; than the later federal reserve system?
8. Was the security of the national bank notes better than that of the greenbacks?

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Part III—The United States as a Dominant Industrial Power

CHAPTER XIX

FINANCIAL PROBLEMS OF RECONSTRUCTION; THE PANIC OF 1873

New Era Brings New Conditions.—With the close of the Civil War the industrial development of the United States entered upon a new stage. From that time on, the student of economic history can trace the movements which have continued, almost without interruption, to the present day. The period following the Civil War was an era of industrial growth quite surpassing that of any earlier epoch. In it we find the factory system at last fully established, and manufactures developed to a point that gave the United States the undisputed industrial leadership of the world; we find industry and commerce aided by accumulations of capital which in earlier years would have been thought fabulous; we find labor advancing to power formerly unheard of, with resulting problems in the relationships between employer and employee; we find finance playing an increasingly important part in politics and in the thought of the people. It is to this period of industrial growth that we now turn our attention.

Financial Problems Following the Civil War.—The Civil War solved for all time the problem of African slavery on American soil. It created, in its turn, a host of new problems—political, social, industrial, financial—for some of which the solutions are yet to be found.

Among the most urgent of the financial problems faced by the government at the close of the war were those relating to the national debt and to the greenback currency.

The national debt on September 1, 1865, as listed in a subsequent report by Hugh McCulloch, Secretary of the Treasury under Presidents Lincoln and Johnson, amounted to \$2,757,689,571.43. The government began energetically to pay off this debt. Federal receipts, particularly from tariff duties and from the internal revenue tax, were abundant during the period of business prosperity following the war, and between April 1, 1865, and November 1, 1868, the volume of debt had been reduced by more than \$470,250,000. At the latter date, most of the different interest-bearing obligations had been consolidated into 6 per cent bonds, with varying dates of maturity.

In the presidential campaign of 1868¹ an attempt was made by certain Democratic leaders to make an issue of the method of paying the public debt. The acts authorizing some of the issues of bonds, while prescribing that the interest should be paid in coin, did not specifically state the kind of money in which the principal, when due, should be paid. According to an argument which became known as the "Ohio idea," the government had the right to pay the principal of these bonds in greenbacks. "The same currency for the bondholder and the plow-holder" was the slogan of the supporters of this policy.

As the greenback currency still was at a discount, the adoption of the "Ohio idea" would have been a partial repudiation of the national debt. It would have been an expedient of

¹ President Lincoln, re-elected in 1864, was assassinated in 1865, just after Lee's surrender had terminated effective resistance to the Union armies. He was succeeded by the Vice-President, Andrew Johnson, who served the remainder of the term. Johnson and the Republican leaders in Congress soon became engaged in a series of bitter quarrels, mainly over policies of "reconstruction," that is, the terms upon which the states of the defeated southern Confederacy should be readmitted to the Union. In 1868 General Ulysses S. Grant, commander of the Union armies in the later part of the war and the military hero of the north, was elected President in a sweeping Republican victory.

doubtful honesty and would have been certain to impair the credit of the government. Fortunately, the policy of paying the debt in greenbacks did not prevail. It was not, in fact, officially indorsed by either party.

The first act of Congress (March 18, 1867) under President Grant's administration, and the first to which the new President affixed his signature, was one which pledged the government to pay all outstanding bonds and notes "in coin or its equivalent," unless they had been issued on terms which specifically authorized another method of payment. This action did much to improve the credit of the government, at home and abroad.

In 1870 the government began the refunding of the national debt into bonds bearing rates of interest lower than 6 per cent. By December, 1872, about \$20,000,000 had been converted into new 5 per cent issues.

The National Heritage of Legal Tender Currency.—The statement of the volume of the public debt on September 1, 1865, showed greenbacks, or legal tender Treasury notes, outstanding to the amount of \$433,000,000. We already have observed the origin of these notes and their depreciation in value during the war. Following the victory of the Union they had gained greatly in value, but they were still at a discount as compared with gold.

In February, 1870, the Supreme Court of the United States declared unconstitutional the action of Congress by which these Treasury notes had been made legal tender (see Chapter XVII, page 176). The next year, however, the personnel of the court had been changed, and a new decision reversed the former action. The legal tender law was upheld.

Soon after the close of the war Secretary McCulloch devised a plan for gradually redeeming the greenbacks, using for that purpose a part of the coin which came into the Treasury,

particularly in payment of import duties. By an Act of April 12, 1886, Congress authorized the Secretary of the Treasury to retire \$10,000,000 of greenbacks in six months, and \$4,000,000 a month after the expiration of that time. Under this act, greenbacks to the amount of \$44,000,000 were retired. Congress, however, yielded to the demands from many quarters for a continuation of cheap money, and in 1868 ordered the retirement of Treasury notes halted.

During the panic of 1873, to which we are soon to turn our attention, the United States Treasury was appealed to by many business men to re-issue some of the greenbacks which had been redeemed but which had not been destroyed, and thus relieve the money stringency. The government yielded in part to this plea, and \$26,000,000 in currency was reissued in exchange for United States bonds.

The clamor for more abundant currency was persistent, and in 1874 Congress passed what was known as the "Inflation bill," ordering an increase in the total of Treasury notes in circulation to \$400,000,000. This bill was vetoed by President Grant, who in this instance showed more financial wisdom—or more courage—than did Congress. A new bill was then passed, and signed by the President, which prescribed that the circulating volume of Treasury notes should remain at the amount then outstanding, which happened to be, in round numbers, \$382,000,000. By a later act, in 1875, Congress again authorized the retirement of Treasury notes, and the greenback circulation was reduced to \$346,681,916. In 1878, however, this retirement was again halted by statute, and the volume of greenbacks in circulation remained permanently at the figure just given.

The agitation for an increase in the volume of currency was not to cease. In one form or another, as we shall see later, it has continued down to the present day, and has exerted an important influence upon politics and legislation.

The Resumption of Specie Payments.—One more event should be noted in our study of the history of greenback currency. This is the resumption of specie payments—which in this particular case means the action of the United States government in beginning the redemption in gold or silver coin of its circulating notes as presented at the Treasury. The greenbacks, as we have learned, were promises by the government to pay the face value in coin to the bearers. There was no fixed time for redemption, however, and various obstacles—real and imaginary—stood in the way of actually exchanging the greenbacks for gold.

In 1875 Congress decided that specie payments should no longer be deferred to the indefinite future. On January 14 of that year a bill was passed setting January 1, 1879, as the date upon which the Treasury would begin to give coin in exchange for all greenbacks presented. As the date of specie payment approached, the Treasury laid in a supply of gold to meet the needs. Gold coin to the value of more than \$133,000,000 was ready on the first day of 1879. From that day, all notes presented were redeemed. The result was that within less than three weeks' time gold and the greenbacks were equal in value.²

The resumption of specie payments did not mean that the Treasury notes were withdrawn from circulation, or that their volume fell below the \$346,681,016 fixed by the statute of 1878. It did mean, however, that the greenbacks, instead of being "inconvertible" paper, became actual notes which the government was at any time ready to pay in coin.

²As a matter of fact, upon the resumption of specie payments a relatively small amount of greenback currency was presented for redemption. The mere fact that the bills could be exchanged for gold satisfied their holders and brought their value up to that of coin. Then, as before and since, a paper currency which is redeemable on demand circulated readily and without question. The principle involved is the same as that which implies a creditor to press for payment from a debtor whose ability to pay is doubtful, while at the same time he finds little need for money which he has loaned to another man whose credit is unquestioned. The same principle is illustrated in the story—perhaps apocryphal—of a run upon a western bank which was halted when messengers came into the building staggering under the "weight" of sacks—which actually were full of poker chips.

Gold Speculation and "Black Friday."—The speculation in gold which we have noted (see Chapter XVIII, page 187) as an incident of war-time inflation of the currency, did not cease with the conclusion of peace. Gold did not again leap to a commodity value as great as that of 1864, but it continued to command a premium, the varying scale of which was a constant incentive to speculative activity.

In 1869 a spectacular attempt to "corner" the gold supply of the country caused a furious financial upheaval and led to charges that the administration of President Grant was not without complicity in the transactions. This manipulation of the gold market was carried on by Jay Gould and James Fisk, then prominent in financial and railroad affairs. These two speculators had secured control of the Erie Railroad, much of the revenue of which was derived from freight on grain shipped to the eastern seaboard. They conceived the idea that the farmers along the route could not afford to ship their crops to market unless grain prices advanced, and that one way to cause this advance would be to increase the price (that is, the premium) on gold. Their reasoning was sound, in so far as the fact that as gold advanced, the value of the paper currency with which the country did business would decline, and this decline, in turn, would push up the prices of commodities.

To carry out their idea, Gould and Fisk began to buy gold in the market, at the same time seeking to influence President Grant to prevent the sale of the gold held in the United States Treasury. For a time the manipulation seemed successful. In early September, 1869, gold stood at 132, that is, a gold dollar was worth \$1.32 in currency. As more and more of the floating supply of the metal was brought under the control of Gould and Fisk, importers and others who had imperative need of gold rushed into the market, and the price was swiftly bid up. On September 23, gold closed at 144. In the meantime Gould

became frightened and secretly sold a part of his holdings, but Fisk continued his accumulations.

On Friday, September 24, a day which has gone down in financial history as "Black Friday," gold reached 162. Hundreds of speculators who had contracted to sell at lower figures faced ruin. The financial district was in an uproar. At this juncture Grant authorized the Secretary of the Treasury to sell \$4,000,000 of United States gold in one day. This broke the "corner." Men refused to pay famine prices for the precious metal when they knew the supply in the United States Treasury was to be poured into the market. Before the end of the day the price fell to 135.

History generally has acquitted President Grant of any dishonest motive in connection with the Gould-Fisk operations. The incident furnishes one of the many examples of his lack of wisdom in selecting associates and in permitting himself to be influenced by relatives and friends.³

The Panic of 1873.—Reckless speculation, of which the attempted gold "corner" just described is a sample, was one of the causes which brought on the panic of 1873, one of the most severe of the financial crises through which the country has passed. Overconfidence in business stability, aided by a plentiful supply of a depreciated currency, had led to inflation and unreasoning expansion, in a manner somewhat similar to that of the years preceding the panic of 1837. (See Chapter IX, page 96.) Men failed to realize that the enormous destruction of property in the Civil War had vastly reduced the actual wealth of the nation. To this waste of resources during the war was added the destruction wrought by two disastrous fires, that in Chicago in 1871 and that in Boston in 1872.

³ A full discussion of the Gould-Fisk speculations will be found in James Ford Rhodes' "History of the United States," Vol. VI, p. 247 and following pages. The incident is of value chiefly as an illustration of the low standards of financial and political morality of the times.

Tariff laws which gave a high measure of protection to manufactures, together with various kinds of encouragement to the construction of railroads, led to feverish activity in all lines of business. Stocks of railroads and of industrial companies soared. Railroad construction was carried on with unprecedented activity, and mostly on borrowed capital, in spite of the fact that many of the new lines were laid through territory that could not pay the expenses of maintenance and operation for many years to come. More than 33,000 miles of railroad were built between 1865 and 1873—more than all the railroad mileage in the country in 1860. Farmers joined in the prevalent expansion, and bought land far beyond their ability to pay for it. Cities and states created debts for the construction of all sorts of public works.

The signal for the pricking of this bubble was given in Europe. There, a period of financial stringency checked the flow of capital to the United States, by means of which many enterprises had been financed. American bankers, in turn, began to prepare for the coming storm by calling in their loans and raising rates of interest. On September 18, 1873, the famous brokerage house of Jay Cooke and Company, overburdened with obligations of the Northern Pacific Railroad, failed. Then the financial structure of the country tumbled like a house of cards. Banks and commercial firms all over the nation were forced to the wall. On September 20 the New York Stock Exchange closed its doors and trading there was suspended for eight days.

The period of actual crisis lasted only a few weeks. For five years or more, however, there was business stagnation, hard times, and unemployment. Says the historian Rhodes: ⁴

These years are a long dismal tale of declining markets, exhaustion of capital, a lowering in value of all kinds of

⁴History of the United States, by James Ford Rhodes, Vol. VII, p. 52.

property, including real estate, constant bankruptcies, close economy in business and grinding frugality in living, idle mills, furnaces and factories, former profit-earning iron mills reduced to the value of a scrap heap, laborers out of employment, reductions of wages, strikes and lockouts, the great railroads riots of 1877, suffering of the unemployed, depression and despair.

By about 1878 business had recovered from the effects of the panic, and the country again was enjoying normal prosperity.

TOPICS FOR REVIEW AND DISCUSSION

1. What was the volume of the national debt on September 1, 1865? Why was it possible to reduce the debt rapidly after the close of the war?
2. What was the "Ohio idea," and what was the outcome of the suggestion?
3. What were the greenbacks? Trace their history up to the resumption of specie payment.
4. Why did the resumption of specie payments bring the value of Treasury notes up to an equality with gold?
5. Describe the attempt of Gould and Fisk to control the gold supply of the nation. What was the outcome?
6. What were some of the causes of the panic of 1873? Describe the panic and its effects.
7. From our study thus far, can you describe some of the customary symptoms of an approaching business depression, and trace its probable course?
8. Study in an encyclopedia or other reference work the life of Jay Cooke; report on his business career and his services to the nation in connection with the financing of the Civil War.

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CHAPTER XX

AGRICULTURE AND THE SETTLEMENT OF THE WEST

Impetus to Agriculture During War.—The Civil War, as we have noted in earlier chapters, came after more than fifty years of rapid development of new territory; in fact, the westward movement was one of the important causes of secession. Migration toward the frontier did not end with the outbreak of war. The increased demand for foods, livestock, and raw materials during the war (see Chapter XVIII, page 183) furnished a stimulus to agriculture, and resulted in additional land being brought under cultivation, particularly in the grain regions of the middle west. Hundreds of thousands of men from the farms went into the armies, and those who were left were forced to adopt more scientific methods of cultivation and to make greater use of machinery, in order to keep the output up to the needs of the nation.

With the close of the war and the disbanding of the armies, many former soldiers found themselves out of employment or dissatisfied to return to their former pursuits. Thousands of such men migrated to the west, to begin life anew on the prairies of Kansas or Nebraska or in the mining regions of Colorado or California. The panic of 1873, with its toll of business depression and unemployment, sent thousands more fortune seekers toward the frontier.

The Homestead Law.—To these economic and social causes for migration, the government added a powerful encouragement through the enactment of the Homestead Law of 1862. We have had occasion previously to observe (see

Chapter X, page 106) the varying methods by which the government sought to get the public land into the hands of settlers who would bring it under cultivation. Through all the period before the Civil War, the tendency had been to make it easier for the pioneer farmer to secure a tract of land directly from the government. Until 1862, however, all regulations had required payment for the land. In that year Congress enacted that any person who was the head of a family, who was twenty-one years of age or over, and who was a citizen of the United States or had filed his declaration of intention to become a citizen, could enter upon a tract of unappropriated public land, including not more than 160 acres. After cultivating the land and making his home upon it continuously for five years, he was to be given title of ownership. The law provided that lands taken up under the Homestead Act should be exempt from seizure to satisfy debts contracted before title was secured. This provision made it easier for the man who had been unfortunate in his earlier business ventures to make a fresh start. The principle embodied in this law has prevailed in all subsequent legislation relating to the public domain.

Passage of the Homestead Law was attended by an animated controversy as to its wisdom, which has continued down to the present day. Friends of the act declared it encouraged farming, increased the food supply, caused more rapid settlement of the country, and discouraged radicalism and disorder by adding to the number of rural home-owners. On the other hand, it was contended that under the Homestead Law the most valuable of the remainder of the public land was squandered in one generation; that many frauds were perpetrated, and that it was unfair to allow men who had paid no money for their land to compete in the grain markets with eastern farmers who had large investments.

Whatever may have been the merits of the controversy,

the Homestead Act caused a marked increase in the settlement of the agricultural lands of the west. Between 1862 and 1880 the government granted to individual settlers more than 65,000,000 acres. The steady migration of settlers—at times reaching the proportions of a “rush” when some new tract of land was thrown open to entry—pushed the frontier back until at last civilization extended from the Atlantic to the Pacific.

Less romantic, perhaps, than the advance into the Ohio and Mississippi valleys a half-century earlier, the migration into the plains and mountains of the western half of the country was nevertheless of immense significance in the economic, as in the political and social, history of the United States. The homestead became the outpost of civilization. With the settlers' cabins there sprang up in brief time school houses, churches, and towns.

This migration had the effect, as has been pointed out in earlier chapters, of ending the era in which desirable agricultural land was to be had for the asking. There are yet unclaimed tracts of government land some of which doubtless will be put to use when increased demand for foodstuffs or improved methods of farming makes its cultivation profitable. Within less than a generation, irrigation and scientific methods of “dry” farming have brought under the plow many thousands of acres formerly considered well-nigh worthless. It may be expected that further progress will be made in the future. The day has passed, however, when any considerable portion of the population can find means of livelihood by migrating to a new section of the country and taking up public land.

Cattle Raising on the Western Plains.—When the homesteaders reached the unfenced prairies of western Kansas and Nebraska, of Texas, Wyoming, and other sections of the west,

they found large areas already occupied. Cattlemen were making use of the "open range," or unclaimed prairie, for grazing their herds. Here was found the cowboy, of picturesque memory, the rough frontier trading post, and other features of the "old west"—features which now survive mainly on the motion picture "lot" or on the ranch which is conducted primarily for the entertainment of summer boarders. From Texas to the Canadian border herds of cattle—Texas "long-horns" and their descendants—were fattened on the prairie grasses and then driven—in later days shipped—to the packing houses that were springing up in Kansas City, Omaha, St. Louis, and Chicago.

The coming of the homesteader threatened to destroy this industry. Each farmer who fenced his quarter-section reduced by just that much the open range. When settlement increased until fenced farms joined each other for many miles, it became increasingly difficult to drive cattle from one pasturage to another. Between the cattlemen and the homesteaders bitter animosities grew up, which sometimes flamed out in bloody fights. In the end civilization and the homesteader won. The cattlemen themselves found, indeed, that by acquiring ownership of large ranches, they could continue their business and improve the breed and value of their livestock. Open range still exists in some sections of the west, but in the main the livestock industry has become modernized, with large sums of capital invested in land and animals, and with businesslike methods of breeding, fattening, shipping, and sale. Beef production in the United States is at a rate of more than 7,000,000,000 pounds a year, and stockraising is one of the leading industries of several western states.

Development of Agriculture.—We have had occasion to note the gradual development of the United States from a country almost wholly agricultural to a nation of varied in-

dustries. This does not mean, however, that agriculture has declined. On the contrary, while the enormous growth of manufactures and commerce has caused food production to take a less important position in relation to other industries, the value of farm products and the area of cultivated land have steadily increased. In 1910 the value of the products of farms in the United States was nearly \$8,500,000,000, an increase from less than \$2,000,000,000 in 1870. By the census of 1920 it was reported at more than \$21,000,000,000.

The improved farm land of the country amounted to a little over 163,000,000 acres in 1860; to more than 284,000,000 acres in 1880; to 478,451,750 acres in 1910; to 503,000,000 acres in 1920. By 1910, more than half the cultivated land was west of the Mississippi.

The greatest expansion of agriculture has been in the grain producing regions of the north central states. In these states wheat—winter and spring—and corn are the most important staples. With the increase in cultivated area has come a still greater increase in the use of agricultural machinery. Mechanical aids to farming have included threshers, harvesters, cultivators, planters and other implements, together with power tractors applied to various kinds of work. Of the period up to 1880, a writer on economic history says:¹

By means of these improved agricultural machines the average amount of grain that could be harvested, threshed, and prepared for the market, from the standing grain to the marketable product, by a single man per day, was increased from about four bushels in 1830 to about fifty bushels in 1880.

This increase in the productive capacity of the farmer has continued down to the present day. Its importance can be realized when we recall that during the last few decades a con-

¹ Economic History of the United States, by Ernest Ludlow Bogart, p. 310.

stantly increasing proportion of the nation's population has been withdrawn from the farms and crowded into cities and industrial communities, there to be fed through the efforts of the men remaining on the land.

Without the increase in the ratio of foodstuff production to the men employed on the farms, the growth of present-day industrial civilization in the United States would have been impossible. Today, with only a little more than one-quarter of the nation's population engaged in agriculture, the population, both urban and rural, is better fed than were the inhabitants of the United States at the beginning of the nineteenth century, when the vast majority were on the farms.

The value of all the farm implements and machinery on the farms of the country in 1880 was estimated at \$406,520,000; in 1910, at \$1,265,150,000; in 1920, at \$3,594,772,928.

The increasing production of foodstuffs led to a large export trade in grain, flour, and kindred products. Soon after the Civil War the United States became an important source of the world's supply of foods and raw materials. Before the end of the first two decades of the twentieth century the nation was indisputably the leading producer of these commodities.

Difficulties of Agriculture.—As the frontier was pushed backward and new areas of land were brought under cultivation, increasing difficulties confronted the farmer—difficulties which for a time it seemed that the improved methods and greater use of machinery scarcely offset. Conditions of the soil and climate different from those of the east prescribed changed methods of planting and cultivation. In some parts of the country, elaborate and expensive systems of irrigation, sometimes made possible through government aid, had to be resorted to as a means of watering arid lands. Railroad facilities were inadequate and freight rates sometimes were high and inequitable. Marketing conditions often were ad-

verse to the farmer, and provision for credit was largely lacking.

More serious than all was the steady fall in the prices of grains and produce. For a quarter of a century after the close of the Civil War, prices of most commodities declined. This was due in part to increased production, in part to the depression following the panic of 1873, and in part to the gain in the value of the currency, described in the preceding chapter. Now, the rise of the value of currency to an equality with that of gold was in the long run a benefit to the country. It must be remembered, however, that the farmers, particularly in the west, generally were in debt. A more valuable currency reduced the money return they received for their crops; on the other hand, their mortgages and notes were payable in dollars, and when dollars were more valuable at the time the debts fell due than they had been when the debts were contracted, the debtor was the loser. A recent historian says:²

The farmer found the size of his mortgage, as measured in bushels of wheat and potatoes, growing steadily and relentlessly greater. The creditor received a return which purchased larger and larger quantities of commodities. The debtor class was mainly in the west; the creditors, mainly in the east.

The distress of the farmers, growing out of the condition just described, had important effects upon the financial and political activities of the closing years of the nineteenth century. Some of these effects we shall have occasion to observe in the later chapters. For the present it is sufficient to note that the trend of prices finally was reversed, and that the early years of the twentieth century saw a steadily increasing prosperity in the farming districts. Particularly during the World War, the prices of farm products rose swiftly.

² The United States since the Civil War, by Charles Ramsdell Lingley, p. 97.

In the period of depression which began in 1920, the farmers again suffered severely from declining prices of their products. Their situation in 1921 and 1922, in fact, resembled to a considerable extent that of the farmers of the seventies and eighties. Agricultural conditions of the very recent period will be considered in later chapters. We may pause here, however, long enough to call attention to the fact—abundantly verified by experience—that agriculture is still an industry of basic importance, and that the community at large cannot enjoy prosperity of a substantial or lasting kind while the food producers are suffering loss.

Agriculture in the South.—The close of the Civil War found the states of the defeated Confederacy prostrate. Their business was ruined, the value of their slave property was wiped out, and they had suffered enormous losses of resources and of manpower. In no particular was their poverty more complete than in their agriculture. The elaborate system of cotton culture by slave labor on large plantations had been uprooted. The sorely harassed planter had to set about it to build up a new system, based largely upon free negro labor.

It happened that at the close of the Civil War cotton brought a high price in the world's markets, largely because the supply from the southern states had been cut off. In 1865 cotton brought 43 cents a pound, and in 1866, although the blockade of the southern ports had been lifted, the price had fallen no more than to 30 cents. It seemed the part of wisdom, therefore, for the southern states to resume the cultivation of the staple which had lured them into secession and war. At first attempts were made to revive the large plantation system, paying wages to former slaves. This, however, proved generally unsuccessful. Then the plantations were divided into small tracts, which were worked independently by both negroes and whites, who sometimes purchased the land at the low prices to

which it had fallen, and sometimes paid rent, usually in the form of a share of the crop. Cotton continued to be the main crop of the far southern states, although there was more diversification of products than before the war.

The custom of raising cotton on small farms, and largely by the labor of tenant farmers, has continued down to the present time. The south has experienced alternate periods of prosperity and depression, as the cotton crop has been bountiful or meager, the price high or low. In recent years, moreover, a serious problem has been added through the damage wrought by the cotton boll weevil, and up to the spring of 1923 no effective means of combating that pest had been generally adopted.

In the years of the World War and those immediately following, agriculture in the south was adversely affected by the loss of much of its negro manpower, which had been attracted by the high wages to be earned in industrial pursuits, and particularly in the north. The northward migration of negroes was one of the marked features of the war period, and led to serious disturbances, industrial and social.

TOPICS FOR REVIEW AND DISCUSSION

1. What were some of the reasons for the rapid settlement of the west after the Civil War?
2. What was the Homestead Law? In what important feature did it differ from former land regulations?
3. What was the "open range"? Why did the settlement of the prairie states threaten the cattle industry?
4. What have been some of the causes of the increasing use of agricultural machinery? Some of the results?
5. What were some of the difficulties confronting the farmer between the Civil War and the end of the nineteenth century?
6. Describe the agricultural system of the south after the war.
7. What would have been the result if, with the increasingly large population of cities and industrial centers, the farm output per man had remained stationary?

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CHAPTER XXI

RAILROAD EXPANSION AND CONSOLIDATION

National Dependence upon Transportation.—The western migration described in the preceding chapter, like other movements of national expansion which occurred both at earlier and at later periods, was accompanied by grave misgivings. There was no lack of prophets of evil who predicted that the nation was growing beyond the limits of successful administration; that a domain so huge would fall apart, as it were, by its own weight; that conflicting local interests would provide a centrifugal force too strong to be resisted by the cohesive elements in the Union.

These predictions were not without reason, if interpreted on the assumption that methods of transportation and of communication were not to keep up with the expansion of population and of territory. It is true that in the years before the Civil War, weeks were consumed in a journey from the Mississippi to the Pacific coast. The pioneer who crossed the Rocky Mountains practically dissolved relations with his old home, as had his grandfather who crossed the Appalachians.

Today a copper mine in Arizona is managed from headquarters in New York; a Chicago manufacturer lives during the winter in southern California, without taking his fingers from the pulse of his business; cattle fattened in Wyoming are slaughtered in Chicago, and the meat is shipped to Texas; passengers are carried across the continent in a few days, and intelligence is transmitted in fractions of seconds.

All this is the fruit of the American system of transportation and communication, which has been the indispensable accompaniment of national development and expansion. It is

true that in the earlier period—and to some extent in all eras of colonization—settlement outran facilities for transportation. The pioneers pushed into the open spaces of the west, with only their faith in the future to give assurance that the domain they were bringing under the plow ever would be connected commercially with the markets of the east. The fulfillment of the pioneers' faith called into being some of the most far-seeing business genius thus far known in American history. For many years the building of means of transportation called for the very highest expression of that constructive imagination and daring which is one of the essential elements of industrial supremacy.

New Need for Railroad Extension.—As we have seen, the lure of the west sent pioneers to the prairies of Kansas and Nebraska and to the mining districts of the Pacific coast and the Rocky Mountain region far in advance of the railroads. Distant territories had become relatively populous at a time when traffic still was carried on by means of wagons or pack trains, or by ships around South America. It was inevitable that there should then develop an insistent demand for railroads between the east and the rapidly advancing west. After 1860, much of the economic history of the country for many years centered about the efforts of the railroads to catch up with the development of new territory.

It should here again be noted that the United States throughout its history has been in large measure dependent for its prosperity upon adequate and cheap means of transportation. We have observed (see Chapter XI, page 112) the early efforts to provide carrying facilities by means of roads, canals, and railroads. In later periods, with the expansion of the country, the wider distribution of population and the development of trade, the railroad became all-important. Whole sections were developed and whole industries grew up, depending

upon adequate transportation at reasonable cost. For many years the quality of railroad service steadily improved, while its cost generally was lessened. This had important effects upon industry and trade and upon the prosperity of the people. The tendency in recent years toward a reversal of this process, and an increase in the cost of carrying persons and commodities, has resulted in serious problems, some of which are yet to be solved.

Railroad Building after 1860.—The beginning of railroad transportation in the United States did not immediately result in the construction of railroads on a large scale. For many years railroad building proceeded slowly. As late as 1860 only 30,626 miles of track had been laid, and most of this was in short lines, operated under different managements and sometimes with different widths of track, so that cars could not be transferred from one road to another. Of the total mileage in 1860, about 30 per cent was in the south. By far the greater part was in the states east of the Mississippi, although lines had been extended short distances west of Chicago, to points in Iowa and Wisconsin, and west of St. Louis as far as Syracuse and Macon City, Missouri. In the south, a line extended a short distance west of New Orleans.

The original wooden rails with iron strips on the tops had practically disappeared before 1860, and trains ran on rails of iron. The steel rail, however, largely adopted in a later period, had not yet made its appearance. Rails, bridges, and locomotives were light, trains were crudely built, and conveniences were primitive.

The outbreak of the Civil War interrupted railroad building. Soon, however, the need of added transportation facilities for war purposes and for the growing needs of industry and commerce caused a quick recovery. Then began the era of rapid railroad expansion which is one of the striking fea-

tures of American industrial history. By 1870 the mileage had increased to 52,914; by 1880 to 93,296. In the next decade the extension was even greater, the mileage in 1890 being 163,597. By 1900 the railroad mileage had increased to 193,345; by 1910, to 238,609; by 1920, to 253,152.

A Railroad Across the Continent.—The discovery of gold in California in 1848 had important results, political, social, and economic, some of which we have noted in our earlier study. One of the most significant of these was the demand for railroad communication between the Atlantic and the Pacific coasts. In the lack of that communication, travel was mostly overland, by wagon and on horseback, although many travelers made the long journey by sea around the southern point of South America. Commodities were laboriously "freighted" in wagons over the Santa Fé trail and by other routes.

For some time before 1860 the project of a railroad to the Pacific coast had been discussed. There were, however, serious obstacles to be overcome. The road, if constructed, would lie through mile after mile of desert, with almost no local freight or passenger traffic to pay the costs of construction and operation. As an investment for private capital the prospect was not inviting.

But the need of railroad communication was of public, as well as private, concern. It was argued that the nation as a whole would gain through the establishment of a closer bond between the east and the west, and this argument gained strength as the drift into civil war became evident. The sympathies of the western populations were in the main with the Union cause; it seemed the part of wisdom to provide facilities of communication, by which the support of these distant regions might the easier be made available to the government.

It was not particularly difficult, therefore, to interest the

government in the project. In 1862 Congress passed a bill granting aid to the Union Pacific and the Central Pacific railroads for the construction of a connecting line. At that time the Union Pacific extended west as far as Omaha, and the Central Pacific had a short line in California, with a terminus at Sacramento. By the Act of July 2, 1862, the Union Pacific was given a grant of \$27,236,512, and the Central Pacific received \$27,855,562. This encouragement appearing insufficient, Congress in 1864 granted to the two railroad companies every odd section of public land in a strip twenty miles wide along the entire route of the proposed extension. This grant amounted to about 25,000,000 acres.

With this liberal government subsidy, the roads pushed construction of the line across the continent, and the two roads were joined May 10, 1869, at Promontory Point, near Ogden, Utah. The last spike, made of California gold, was driven with impressive ceremonies, each blow of the sledge being telegraphed east and west.

With one railroad actually built across the continent, other lines were soon constructed, and several of these, too, received government aid. In 1864 the Northern Pacific was granted 47,000,000 acres of public land to aid in the construction of a line from Lake Superior to Puget Sound and the Columbia River. This line was completed in 1883. By that time other railroads to the Pacific were finished or were in process of construction, and the grain raising districts between the Mississippi River and the Rocky Mountains were rapidly being crossed and recrossed with railroads connecting with the commercial centers of the east and middle west.

Railroad Finance and Rates.—The practice of granting public aid to railroad projects was to be replaced after a few years by a policy of suspicion and resentment, and of harsh, often unenlightened and unreasoning, regulation. The public

and the railroads, after a beginning of co-operation and mutual usefulness, were to part company and to become, to all appearances, intent upon each other's injury. For this change and for all its results, the responsibility lay in part with the railroad managers, in part with the public, and both have suffered in full measure for their faults. In the following pages we shall trace the origin of the hostility between the people and the carriers which should have been their most useful servants, and some of the results of that hostility.

In spite of the liberal aid granted by the federal government, and sometimes by the states, the railroads early encountered financial difficulties. The panic of 1873, as we have seen (see Chapter XIX, page 197), was due in part to reckless speculation in railroad stocks. Many of the principal lines in the country became bankrupt, and went through reorganizations before they were able to earn enough to pay expenses. These financial difficulties were partly the outgrowth of natural conditions, and partly the result of reckless or dishonest methods on the part of railroad promoters. Extravagance and fraud exhausted the funds of the railroad companies, and huge sums were expended in attempts to corrupt legislatures and courts. The custom of "watering" stock—that is, issuing stock for which no money had been advanced—was almost universal. Freight rates were manipulated in the interests of communities or even of individual shippers. These practices worked serious harm to business interests and to the public, in spite of the fact that rates generally were declining and the quality of service improving.

For this discreditable early financial history of American railroads, many causes may be advanced. It must be remembered that the standards of business morality in the sixties and seventies were low in comparison with those of the present day, and that practices then were sanctioned which now would be frowned upon by business men and by the public alike.

Moreover, railroad building and operation was an undertaking of great risks and uncertain profits. Capitalists who put their money into it believed that they were entitled to high returns, if their ventures were successful. Perhaps the most important cause of reckless financiering, however, was the ignorance and general indifference of the public, which was unused to "big business" and had not yet been persuaded to favor government regulation of private enterprises. It was believed that competition between rival roads gave the best protection to shippers and to the public. It was soon to be learned, however, that in the railroad business competition was an insufficient safeguard of community interests. Competition, in the fullest sense, actually existed in many parts of the country in the years between 1870 and 1880, and brought results which in the end were highly undesirable.

One feature of this railroad competition was a series of "rate wars," in which rival roads fought for passenger and freight business by cutting rates far below the cost of furnishing the transportation. Says Professor Lingley:¹

The most famous of these contests had their origin in the grain carrying trade from the lakes to the sea-board. The entry of the Baltimore & Ohio and the Grand Trunk into Chicago in 1874 stimulated a four-cornered competition among these roads and the Pennsylvania and New York Central for the traffic between the upper Mississippi valley and the coast. Rates on grain and other products were cut, and cut again; freight charges dropped to a figure which wiped out profits; yet it was impossible for any line to drop out of the competition until exhaustion forced all to do so. . . . Since the rate wars were clearly bringing ruin in their train, rate agreements and pooling arrangements were devised.

Railroad Combinations and Pools.—Before considering these pooling arrangements, by which is meant agreements by

¹ The United States since the Civil War, by Charles Ramsdell Lingley, p. 204.

roads to divide the traffic, or the receipts from traffic, in certain territories, let us note the earlier combinations and consolidations which had built out of many hundreds of short, independent lines a few large railroad systems. We already have seen that in the beginning of railroad development the roads were short and that there was scant provision for through traffic. It was not until after 1850, in fact, that any road controlled as much as 500 miles of continuous track. Between 1850 and 1860 there were some consolidations of short lines into longer systems, and after 1860 the process went on rapidly.

A typical example of this form of combination was the formation of the New York Central system. Before 1853 the 300 miles between Albany and Buffalo, New York, was covered by five distinct railroads, of which the longest operated over a span of 76 miles. In that year these five roads combined with five others to form the New York Central. Then other roads were added to the system. In the meantime another consolidation was being put together by Cornelius Vanderbilt, who became president of the New York and Harlem Railroad in 1857 and gained control of the Hudson River Railroad in 1864. In 1867 Vanderbilt came into control of the New York Central, which two years later he consolidated with the Hudson River line. Thus enlarged, the New York Central sought extensions westward, and under Vanderbilt's leadership it gained control of the Lake Shore, the Canada Southern, and the Michigan Central, thus forming a through line from New York to Chicago, with numerous branches to important commercial points off its main line.

Similar consolidations formed the Pennsylvania, the Baltimore and Ohio, and other systems which, with some modifications, have survived to the present time.

It was between such powerful railroad rivals that the rate wars previously described took place. Railroad managers

however, soon gave up the expensive sport of bidding for traffic at ruinous rates, and began to make agreements of various sort between themselves. Sometimes the territory served by two or more roads would be divided, and each road would have the benefit of all the freight originating in a designated district. At other times roads would pool, or put together, their earnings, which later were divided according to a previously agreed scale.

These traffic agreements, while they limited destructive competition, brought serious abuses in the shape of unfair rates. Moreover, there was growing up a system of discriminations between different localities, between different classes of freight, and even between different individuals. Some of these discriminations were due to natural or business conditions, as, for example, the lower rates between cities where there was water competition to be met. Others were indefensible. All these practices, those which were actually unfair and those which only appeared to be so, combined to bring about a series of regulatory laws, under which the public, in the person of the government, assumed a steadily increasing authority over the railroads.

TOPICS FOR REVIEW AND DISCUSSION

1. What caused the demand for railroad facilities in the west? Why was it sometimes difficult to secure private capital for railroad projects?

2. When and by what means was railroad transportation across the continent provided?

3. What were some of the financial abuses in the early history of railroad operation? What were some of the unfair practices regarding rates?

4. What were the effects of the rate wars between rival railroads?

5. What were railroad "pools"?

6. Describe the manner in which the New York Central system was formed.

7. Why did not unrestrained competition among railroads protect the interests of the shippers and the public?

8. Study in an encyclopedia or other reference work the life of Cornelius Vanderbilt; report on his career as a railroad organizer.

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CHAPTER XXII

RAILROAD REGULATION; OTHER TRANSPORTATION DEVELOPMENTS

Early Railway Regulation.—The principle of railroad regulation was not a new idea when, in the seventies and eighties, it became a prominent issue in business and politics. As early as 1829 a railroad charter granted by the state of Connecticut prescribed the rates to be charged for carrying freight. Other early charters reserved to the state the power to revise rates when the earnings of the carrier exceeded a fixed percentage on its capitalization. But it was not until after the railroads had been consolidated into powerful systems, and the practices of pooling and discrimination had begun to cause widespread discontent, that regulation by states and by the federal government was taken up in earnest.

One of the earliest and most influential campaigns for railroad regulation was conducted by a society called the Patrons of Husbandry, well known in later years as the Grange. This organization of farmers and their families was founded in 1867, with the purpose of seeking to relieve the low state to which agriculture had fallen in the years following the Civil War. (See Chapter XX, page 206.) By 1875 the membership of the Grange exceeded 750,000, its greatest strength being in the middle west. It had come to be a powerful and influential society, to the suggestions of which the political leaders gave considerable heed.

For much of the adversity which he experienced in the seventies and eighties, the farmer, rightly or wrongly, blamed the railroads. Particularly did he believe that freight and passenger rates, particularly the former, were manipulated

with a small regard for either his rights or his prosperity.

It has been one of the misfortunes of the transportation industry that not only has its history not been free from the taint of unethical practices, but its problems and its economic methods are too intricate to be comprehended easily by the man in the street. The conditions which determine freight rates, for example, are not even now well understood by the public. Thus the railroads have been blamed, not only for their faults—and they have not lacked them—but for conditions over which they have had no control. The average citizen and the average lawmaker has found it difficult to discriminate between a secret rebate granted to a favored shipper and a freight tariff which favors a particular city, but which is dictated by conditions wholly outside the railroad business—for example, by the competition of a water route.¹

It is not surprising that the Grange turned its energies in the direction of securing the passage of laws to control railroad charges. One of the strongholds of the Grange was Iowa. In 1874 the legislature of that state passed a maximum rate law, with an elaborate schedule of rates which were permitted to be charged for the transportation of different classes of commodities. Other states, especially in the middle west, enacted similar statutes.

Down to the present time most of the states of the country exercise a greater or less degree of control over railroads. This control generally is placed in the hands of official bodies, sometimes called "boards of railroad commissioners," sometimes "public utilities commissions."

Railroad Regulation by Federal Government.—Railroad regulation by the states, however, is of relatively minor im-

¹ An example of the latter class of apparently discriminatory freight tariffs is furnished by the reduction in freight rates between the eastern and western coasts since the opening of the Panama Canal created a competition which the railroads were forced to meet or retire from the field.

portance. State laws early were attacked on the ground that under the Constitution the control of interstate commerce, or traffic from one state to another, is vested exclusively in the national Congress. This contention was upheld by the Supreme Court of the United States in 1886, in a case growing out of the resistance of the Wabash Railroad to a law passed by the legislature of Illinois. Thereafter, state regulation was confined to traffic wholly within one state.

Even before the decision of 1886, advocates of more strict control of railroads had turned their attention to the federal government. In 1887 one of the most important steps in the whole history of railroad regulation was taken by Congress in the enactment of the Interstate Commerce Law. This act created an Interstate Commerce Commission of five members (the membership was increased by subsequent laws) with authority to hear complaints against railroads and to render decisions, from which, however, appeals could be taken to the United States courts. The law prescribed that charges for the transportation of passengers and freight should be reasonable, and that rates should be publicly posted by the railroads. It prohibited discriminations in rates, pooling, and the charging of a higher rate for a short haul than for a long one. The Interstate Commerce Commission was given power to call upon railroads for annual reports and for other information as to their affairs.

The Interstate Commerce Act is noteworthy as the beginning of federal control of railroads, but it fell far short of being a solution of the problems growing out of railroad rates and practices. Partly by evasions of the law and partly through the effect of court decisions which limited the authority of the Commission, the regulatory activities of the government were to a considerable extent nullified. The Commission itself, eleven years after it was created, complained of abuses which made the transportation system intolerable.

Amendments of Interstate Commerce Act.—Confronted with partial failure of its attempts to regulate interstate railroad traffic, Congress proceeded to strengthen the law. By the Elkins Act of 1903, regulations were made more drastic and penalties for violation were made more severe. Railroads were made liable to prosecution for violation of the law, and shippers who accepted rebates or discriminatory favors could be punished. It also was made a criminal offense for a railroad to charge other than its published rates.

In 1906 the law was made yet more severe. In that year the Hepburn Act was passed. This statute made an important change by including under its provisions express companies, sleeping car companies, and pipe lines for transporting petroleum products and gas. By this law also, the Interstate Commerce Commission was given authority to “determine and prescribe” reasonable rates.

The authority of the Commission was further extended by the Mann-Elkins Act of 1910. This law created a Commerce Court, with jurisdiction over controversies connected with railroad transportation and other commerce. This court was abolished in 1913.

With the enactment of the Mann-Elkins Law, railroad regulation reached substantially the form which it was to hold until the World War. The transportation system during the war period will be considered in a later chapter.

Lake, River, and Canal Traffic.—As railroad facilities spread over the country, and rates—in the earlier years—steadily declined, there was a corresponding decrease in the amount of traffic carried on rivers and canals. In 1882 the tolls on the Erie Canal (see Chapter XI, page 118) were abolished, but this failed to restore the old waterway to its former place as a highway of commerce. Of the lesser canals con-

structed in the days before the railroad became important, nearly all have been abandoned.

Recent years, with increasing railroad costs and rates, have seen a demand for renewed canal facilities, by which commerce will be made less dependent upon railroads. It is for the future to show whether internal canals will again form an important part of the transportation system of the United States.

The decline of canal and river transportation did not extend to shipping on the Great Lakes. On the contrary, the increase in that traffic has been one of the striking transportation facts of recent years. The freight carried on the lakes in 1910 reached a total of 85,000,000 tons. Much of this freight was made up of grains and bulky raw materials, which can be loaded and unloaded easily and carried at small cost in specially constructed vessels. The traffic in iron ore from the Lake Superior mining region to steel plants in the Chicago and Cleveland districts is typical of this class of commerce. Coal, flour, and grain are similarly shipped from one lake port to another.

Electric Transportation, City and Interurban.—The growth of cities created an imperative need for cheap and convenient transportation between different parts of the same community. Horse cars and cable cars first were used, and at times experiments were made in the use of steam-drawn vehicles. The last named method has survived in the steam suburban trains that carry passengers to and from the larger cities of the country. About 1890, electric street cars began to come into general use, and the superiority of this form of transportation soon became manifest. Within a few years every large city and many of the smaller towns were provided with electric street railway systems.

In recent years serious financial and social problems have arisen in connection with street railway fares. With mounting costs of materials and labor, corporations operating these utilities have complained that it was impossible for them to operate on the old schedule of fares without financial loss. Accordingly, many of them have increased their rates, through court action and otherwise. This, however, has often been looked upon as a hardship to the public and as a discouragement to the healthful growth of cities. Final adjustment of the problem remains for the future.

With the ever-increasing concentration of population in the larger cities, the matter of local transportation has come into growing importance. In every business and industrial center, it is a physical necessity that many thousands of workers shall live at considerable distance from their places of work. Adequate and reasonably convenient and economical means of transportation are imperative; the alternative would be an immense extension of the "slum" condition which is rapidly disappearing in most well-governed American municipalities.

Soon after the electric street railway had become established, the same principles were applied in the operation of lines between closely adjacent cities. Thus began the system of electric interurban transportation, which in a few years had extended until in some localities trips of hundreds of miles can be made on electric trains. Electric interurban lines have been constructed most extensively in the central states—Ohio, Indiana, Illinois, Michigan, and Wisconsin. They have been of value in providing quick and convenient service at low rates, which sometimes rivals that of the steam railroads in speed, safety, and comfort.

The aggregate passenger traffic on electric railways, city and interurban, is enormous. In 1922 it was estimated that electric railways carried annually 13,000,000,000 cash passengers and 3,000,000,000 who paid fares with transfers.

Transportation by Motor Cars and Trucks.—Discussion of modern transportation methods would be incomplete without at least a reference to recent developments in motor traffic. In various parts of the country passengers and freight are carried by motor stages and trucks. In 1921, it was estimated, freight carried on motor trucks reached a total of 1,430,000,000 tons, compared with 1,642,251,000 carried on railroads. These figures do not make allowance for the longer average hauls by railroads. Comparing the "ton mileage," the estimates are 6,479,200,000 for motor trucks and 306,755,332,000 for railroads.

In some localities motor vehicles are able to compete successfully with the railroads in carrying freight and passengers, and are able to make rates, over short distances, lower than those charged by the railroads. It has been claimed on behalf of the railroads that this competition is unfair, as the motor trucks and passenger stages use—and wear out—highways paid for by the general public, while the railroads have been obliged to make heavy investments in permanent tracks and are taxed for, among other things, the support of the very highways which are utilized by their rivals.

In 1922 it was estimated that the total number of commercial motor vehicles in the country was 1,375,725.

Transportation by aeroplane, while it has been developed to some extent in the carrying of mail and even at times in the transportation of passengers and commodities, has not yet reached a stage at which it can be considered strictly a commercial enterprise.

TOPICS FOR REVIEW AND DISCUSSION

1. What were some of the causes for the beginning of railroad regulation by law?
2. Who were the Patrons of Husbandry? What were some of their purposes? Does the organization survive at the present day?

Can you think of any other organizations of farmers which have exercised political influence?

3. Why did state regulation of railroads largely give way to government regulation?

4. When was the Interstate Commerce Act passed? What were some of its most important provisions?

5. What were some of the changes made by the Elkins Act? By the Hepburn Act? By the Mann-Elkins Act?

6. Why did canal traffic decline after the railroads came into general use?

7. Describe the development of electric railway transportation.

8. What are some of the commercial uses to which motor vehicles are put?

9. What do you think will be the solution of the problem of furnishing city transportation at low rates and at the same time of providing satisfactory earnings for operating companies?

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CHAPTER XXIII

THE AGE OF COAL AND STEEL

Fuel, Power, and Iron.—The development of transportation which we have traced in the two preceding chapters is one of the notable features of the material and mechanical progress which within two generations has affected profoundly every phase of human life. Two other features have been of equal importance. One is the general adoption of coal as the principal fuel for producing heat and power in all civilized countries; the other is the vastly increased use of iron, generally in the form of steel. These two phenomena are closely related. Without coal, steel making would have remained a small industry, its proportions closely limited by the vanishing supply of wood. Without the many demands connected with steel production, and without the modern power-driven machinery constructed of iron and steel, the coal industry never could have attained its present magnitude. So close is the connection between these two basic industries, and so large is the part which they play in the economic life of today, that the present well may be designated as the age of coal and steel.

The Growth of the Coal Industry.—Coal has come to be one of the primary needs of civilization. A shortage of the supply cripples industry in a few weeks, throws thousands of workers out of employment, breaks down the country's transportation system, and brings suffering to the homes of all classes. An increase in the price of coal is reflected in the cost of practically every commodity. A complete lack of coal, could such a condition come about, would paralyze almost every activity of modern life.

In view of these facts, it is hard to realize that almost within the memory of men now living coal was a comparatively unimportant product in the United States. We already have noted (see Chapter XIII, page 136) the gradual development in the use of coal up to 1860, by which year the annual output of the whole country was somewhat more than 14,000,000 tons. Today the annual production of Pennsylvania alone is more than ten times that amount.

In the period of rapid industrial growth which dates from about the close of the Civil War, the use of coal increased far more rapidly than the population. In 1860 the production of coal was a little more than a half-ton a year for each person in the country; in the early years of the twentieth century it was almost four tons. The growth of the coal industry may be shown in another way by the figures giving the total yearly production, which, in tons of 2,000 pounds, are as follows :

YEAR	TONS
1860.....	14,610,040
1870.....	33,035,500
1880.....	71,481,500
1890.....	157,770,900
1900.....	269,684,020
1910.....	501,596,377
1920.....	645,616,000
1921.....	494,500,000
1922.....	457,235,000

For this enormous increase there were several causes. As population grew and became concentrated in cities, the need for a fuel more compact and more easily transported than wood became manifest, and this need was felt more acutely as the forests with which much of the country originally had been covered gradually disappeared.

Conservation vs. Free Use of Resources.—We have seen that in the earlier stages of national history, the forests were

first a hindrance, then a convenience as sources of firewood and building material, then a means of attaining wealth. In our own and the preceding generation the rapid depletion of the nation's supplies of growing timber has created serious problems. To meet these and other problems of similar nature the policy of "conservation" of natural resources has been advanced. This policy has even been extended to include the preservation of national ownership of waterpower sites, where the thing to be conserved is not an exhaustible resource but the public control of a means of profit.

It is believed by some scientists and economists that the nation's supply of coal will within a few generations give concern through the danger of its exhaustion. It is certain that up to the present the coal supply has been used with lavish prodigality, partly by wasteful methods of combustion and power generation, and partly through systems of mining that leave much coal under the earth, practically impossible to mine after the operations once have been abandoned. The question of future supplies of petroleum is one which causes apprehension to many scientists.

The whole subject of conservation is one which deserves careful consideration. Doubtless it is true that Americans of the earlier periods wasted natural resources which would have been worth untold millions if spared for later enjoyment. It must be remembered, however, that nature and human ingenuity often find ways of replacing resources which are exhausted. There was a time when men seriously contemplated a future in which Americans would be hard put to it to find means of lighting their homes, because the whales, which furnished oil for lamps, were rapidly being exterminated.

Modern Utilization of Coal.—In the later years of the nineteenth century, from a nation of wood burners, America became one in which coal served as the leading domestic fuel.

More important, however, in increasing coal production were the various industrial uses to which coal was put in constantly increasing quantities. As factories multiplied and power machinery came into general use, coal for generating steam and electricity came into greater and greater demand. The production of gas called for additional enormous supplies. Huge tonnages were used as fuel for railroad locomotives and steamships. One of the largest demands came from the rapidly growing industrial giant—the manufacture of steel.

The Production of Iron and Steel.—Iron making is one of the oldest human industries, dating probably from a period before written history began. We already have had occasion to observe (see Chapter III, page 40; Chapter VII, page 75; Chapter XIII, page 140) the development of iron production in the colonial and earlier national periods. Our narrative now has reached a point at which it will be profitable to study this industry more attentively.

Iron is the most abundant metal in the earth's composition. It is estimated by some scientists that one-fifth of the earth's bulk is iron. The metal is widely distributed, but almost never is it found in its pure state. By far the greatest amount is found in nature in the form of what is known as iron ore. This ore consists of a chemical combination of iron with some other element—usually oxygen—with admixtures of various impurities, such as sulphur and phosphorus. A typical iron ore is chemically not much different from iron rust; in fact, when iron is destroyed by rust it has absorbed oxygen from air or water and returned to a condition quite closely resembling the original ore.

In modern practice, metallic iron usually is produced by heating the ore in a blast furnace, using coke, charcoal, or coal as fuel—the use of coke being now almost universal in the

United States. A blast of heated air is blown through the furnace, and limestone is added to the "charge" of ore and fuel. As a result of chemical and physical changes which need not here be explained in detail, the ore is separated into its elements, and the metallic content is drawn off in the form of pig iron. It is possible to cast, or mould, this pig iron, thus manufacturing various articles. By far the greatest part of the product, however, is given further treatment and transformed into steel, which may be described in general as iron which has been cleared of impurities and hardened or toughened by the addition of an alloy, usually carbon. Steel is produced by different processes and is of many varieties, each grade manufactured for particular purposes. Some is hard and brittle; some is relatively soft and easily bent or rolled into different shapes and sizes.

Use of Coal in Iron Smelting.—In ancient times—and in America up to a comparatively recent period—the principal source of heat for separating metallic iron from the other elements in the ore was charcoal, made from wood. We have seen (see Chapter VII, page 75) that the iron industry at one time threatened to destroy the forests of England, and that with the invention of the blast furnace, coal came into use as fuel. History records that in 1619 one Dud Dudley used charred or partly burned coal (similar to modern coke) in a blast furnace. It was more than a century later that coke came into general use in England as blast furnace fuel.

In America the use of charcoal was practically universal until well into the nineteenth century. This was due mainly to the abundant forests, which seemed to make the need for economy in the use of wood a problem of the remote future. The forests, however, proved not to be inexhaustible, but at the same time it was found that the continent was amply sup-

plied with coal, at least some of which would serve as fuel for blast furnaces.

In 1812 some iron was being smelted by the use of anthracite coal. It was not until about 1840 that the practice became general. In that year there were six furnaces in Pennsylvania using anthracite exclusively. In 1846 Pennsylvania and New Jersey had 42 anthracite furnaces with a capacity of 122,000 tons of pig iron a year. In 1854 anthracite and charcoal were of equal importance, each producing about 340,000 tons of iron. From that year the importance of charcoal declined. In 1860, 500,000 tons of iron was produced in furnaces using anthracite coal for fuel, and only about half that amount in charcoal furnaces.

The adoption of anthracite as blast furnace fuel helped to bring about important changes in the conditions of the iron industry as a whole. Previously, most of the iron used in the United States had been made in small furnaces, at almost any point where ore could be obtained and where there was some sort of market for the product. After the adoption of anthracite the furnaces were larger, and the industry began to be concentrated in centers where both ore and fuel could be secured in large quantities. Thus, of the 121 anthracite furnaces in operation in 1856, 93 were in Pennsylvania, 14 in New York, and 6 in Maryland.

While the use of anthracite was in its prime, some iron makers began to experiment with the use of coke made from bituminous coal, which, it was realized, was the predominant variety in the country. Coke, as we have seen, had for many years been used successfully in English blast furnaces. With the increasing cost of anthracite, and especially after the discovery of the famous coking coal (bituminous) at Connellsville, Pennsylvania, coke rapidly came into general use, until in modern practice it is the leading fuel.

An important advance in connection with coke making—

which has not yet been universally adopted—is the by-product process, by which the tar and gas driven off when the coal is burned into coke are collected and utilized. Coal tar and coal gas are valuable for use as fuel, and both contain many substances of great value which are wholly lost when the coke is manufactured in the old-style “bee-hive” oven. The use of by-product ovens has been extended greatly in recent years, and represents a long step toward the elimination of waste in industry.

The Increasing Use of Iron and Steel.—As machinery-using industries multiplied and as railroads were extended over the country and the wooden tracks were replaced with iron rails, the demand for iron and its products advanced by leaps and bounds. In 1880 the production of pig iron was somewhat more than 821,000 tons; in 1880 it exceeded 3,385,000 tons; in 1919 it was about 30,543,000 tons; in 1922 it was 27,219,904 tons.

During the earlier part of the period of the expansion of iron production, the greatest output of finished product took the form of cast iron or wrought iron. Steel, manufactured by the old charcoal process, was used mainly for tools and other articles where extreme hardness was needed; it was too expensive for general industrial use. In England, however, Sir Henry Bessemer had in the meantime perfected the steel making process which bears his name, and which was successfully applied in 1858. The Bessemer process of making steel consists essentially of forcing a blast of cold air through molten iron, thus burning out many of the impurities, and adding the required amount of carbon before the metal is poured out to cool. It is used principally in the manufacture of a relatively soft, ductile steel, adapted to many of the uses to which wrought iron formerly was applied.

Soon after the invention of the Bessemer process, it was

introduced into the United States, where it brought about important changes in the iron industry. It was found that for a multitude of purposes Bessemer steel was better than wrought iron, and that it could be produced more quickly and cheaply than the latter. Particularly, it was applied to the manufacture of rails, the first steel rails being rolled in 1865. For many years the greater part of the steel produced in America was made by the Bessemer process.

The Bessemer process was supreme until a serious shortcoming became increasingly troublesome. As developed in the United States, Bessemer steel making does not rid the metal of phosphorus, and more than a minute quantity of phosphorus makes the steel unfit for use. Many of the iron deposits of the country contain an excess of phosphorus, and are therefore called "non-Bessemer" ores. As steel making increased, it was necessary to utilize these non-Bessemer ores or halt the development of the industry. The problem was solved through the adoption of what is called the "open-hearth process," by which the molten iron is raised to high temperatures by flames of burning gas blown across the surface of the "hearth" or furnace. By this process the phosphorus can be removed. In recent years the open-hearth process has passed the Bessemer process in tonnage of output in the United States, both on account of the possibility of using high phosphorus ores and because for many purposes open hearth steel is considered superior to the Bessemer product.¹

Iron Ores and the Localization of the Steel Industry.—

As we have seen (see Chapter III, page 40; Chapter VII, page 76) iron ore early was discovered in small quantities in the eastern states. As settlement advanced, it was found

¹ The chemical and physical changes by which iron is separated from the other elements in the ore, and by which later it is made into steel in the open hearth or Bessemer furnace, are beyond the scope of an industrial history. The student who is interested in learning more about these processes will find them fully explained in any of the several books on the metallurgy of iron and steel.

that iron ore existed in greater or less amounts in Pennsylvania, Michigan, Ohio, New York, Massachusetts, New Jersey, and other states. From the early national period until after the Civil War, Pennsylvania was the leading state in the production of iron ore. Pittsburgh became the center of the iron industry, thus gaining a distinction which has not yet been lost. As early as the thirties it was known that iron ore existed in the region near Lake Superior. Soon after 1850 these ores began to be shipped for manufacture. As the years passed, it was found that the Lake Superior deposits exceeded in magnitude any others known in the United States.

An iron producing district of much later development is that of Alabama, which produced 4,838,900 tons of ore in 1914. Other iron ore regions are in the Rocky Mountains, where deposits of considerable importance have been worked in Wyoming, Colorado, New Mexico, and where ore bodies have been prospected in other states; and on the Pacific coast. The total production of iron ore in the United States was 56,889,734 gross tons in 1910; 75,167,672 in 1916; 67,604,465 in 1920; 29,282,690 in 1921; 46,963,000 (estimated) in 1922.

The location of the principal steel manufacturing centers has been determined largely by the proximity of supplies of iron ore, coal, and limestone, and by the transportation facilities for raw materials and finished products. Pittsburgh still is looked upon as the center of the industry. Important rival plants, however, have sprung up near the Great Lakes—especially in and around Chicago and Cleveland—profiting by the development of lake transportation. Important iron and steel works have been built in Alabama, where the proximity of iron ore and coal have been combined with a plentiful and cheap labor supply to create unusually favorable conditions for the industry. One steel plant in Colorado uses coal from that state and ore from Wyoming and New Mexico.

TOPICS FOR REVIEW AND DISCUSSION

1. What were some of the causes of the increase in the use of coal after 1860?
2. What are the different fuels which have been used in smelting iron?
3. What were some of the demands which resulted in the increased use of iron and steel?
4. What is iron ore? How is iron produced from the ore? What is coke?
5. Why was the Bessemer process adopted in the United States? The open hearth process?
6. Where were the principal sources of supply of iron ore?
7. What are the advantages in transportation enjoyed by the steel making centers around the Great Lakes? (See also Chapter XXII.)
8. What has determined the location of the principal steel manufacturing centers of the country?
9. What are some of the most important by-products obtained in making coke?

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CHAPTER XXIV

THE SUPREMACY OF MANUFACTURING INDUSTRY

Steady Gain in Manufactures.—The dominance of agriculture among the occupations of the United States, fostered in earlier periods by commercial conditions, by the abundance of land, and by the habits of the people, was not destined to be of long duration. In earlier chapters we have observed the gradual upbuilding of industries which transformed the United States from an almost wholly agricultural country to one which devoted a large part of its energies to manufacture. (See Chapters III, VII, XIII, XVIII, XXIII.) At the end of the Civil War the value of agricultural products still exceeded that of manufactures. From that time on, however, manufacturing gained steadily upon its older rival, and beginning with the last two decades of the nineteenth century, manufactured products made up the greatest source of wealth in the United States.

The period since the Civil War has in fact seen the emergence of the United States as a dominant manufacturing nation. In that period the factory system at last has become fully established, a more or less permanent body of industrial workers has been built up, and an economic organization has been perfected largely upon a basis of manufacturing industry.

Causes of Industrial Growth.—For this gigantic development of manufactures in the United States there have been various causes. First, perhaps, in importance is the fact that the United States is a nation abundantly equipped with raw materials and with means of producing power. In the pre-

ceding chapter we noted the importance of these factors in the development of the steel industry. They have been of no less importance in other manufacturing enterprises. The nation's supplies of coal and iron and copper, of petroleum, of cotton, of lumber, and of foodstuffs have during most periods been sufficient to provide for all domestic needs and to furnish a surplus for export. Likewise the abundant power facilities—both for waterpower and for steam and electricity generated by the use of coal or of natural gas—have given American manufacturers a distinct advantage over most of their competitors.

In recent years a serious problem has arisen through the increasing cost of coal, which has added materially to the expense involved in the production of many manufactured articles. To this has been added the increase in the cost of transportation, both as applied to coal and raw materials, and as applied to finished products. These advances are closely intermingled with labor conditions, to which attention will be given in later chapters. In the years following the World War, as already suggested, the cost of fuel and of transportation entered into some of the most troublesome questions faced by the manufacturers of the country.

Then the manufacturing industry of the United States has had the benefit of a broad domestic market. Continental United States is the largest continuous area in the civilized world in which trade is free and unrestricted. This domestic market available for the manufacturer is not only large geographically, but is rich in its ability to purchase goods. Throughout most of the nation's history Americans have been wealthy, compared with Europeans. This has been important in encouraging the development of industries dependent upon the buying power of the public.

The wealth of the nation has been of advantage to manufacturers, not only by enlarging the market for products, but

also by making available large supplies of capital for investment in industries. It is true that for a time industries grew more swiftly than did the supply of American capital, and that much European wealth was invested in the United States, but this was due rather to the extraordinary growth of industry than to any lack of domestic wealth.

Another encouragement to manufactures has been furnished by the protective tariff. We have observed (see Chapters XII, XVII) the gradual development of the protective principle until, in the stress of Civil War financing, import duties reached levels higher than ever before. We shall have occasion in later chapters to study the tariff changes in the years following the Civil War. For the present it is sufficient to note that in general the tendency has been in the direction of greater protection to American industries.

Wages of American factory labor, and standards of living among the workers and their families, have been higher than anywhere else in the world. This at first sight appears as a disadvantage rather than an advantage to manufactures; and, in fact, it sometimes works hardship temporarily—or even permanently if wages for some classes of labor are forced artificially to levels out of harmony with production or with the incomes of other members of the community. In the long run, however, American business, including the employers of labor, has been aided by the high wages of the American workman. Partly as a result of these high wages, and partly causing them, workmen in the United States at most periods have shown intelligence and efficiency superior to those of laborers in other parts of the world. This has acted directly to the advantage of the employers and of the public at large. In addition, the workers themselves, in their relative prosperity, have been among the best customers for the manufacturer and the merchant. An indirect benefit of the high wage system lies in the fact that it has forced the employer to adopt con-

stantly higher standards of organization and managerial ability, and to do a constantly increasing proportion of the physical work by means of labor-saving machinery.

Growth of Output of Manufactures.—Aided by the circumstances just outlined, American manufactures in the years following the Civil War made unprecedented growth. This growth is indicated by statistics for the succeeding census years:¹

CENSUS YEAR	NUMBER OF ESTABLISHMENTS	NUMBER OF WORKERS	VALUE OF PRODUCTS	CAPITAL INVESTED
1860	140,433	1,311,246	\$ 1,885,861,676	\$ 1,009,855,715
1870	252,148	2,053,996	3,385,860,354	1,694,567,015
1880	253,852	2,732,595	5,369,579,191	2,790,272,606
1890	355,405	4,251,535	9,372,378,843	6,525,050,759
1900	207,514	4,712,763	11,406,926,701	8,975,256,496
1910	268,491	6,615,046	20,672,051,870	18,428,269,706
1920	290,105	9,096,372	62,418,078,773	44,569,593,771

Tendencies in American Manufactures.—In the developments of the last sixty years, manufacturing enterprise has shown a few definite tendencies, an understanding of which is desirable. First, it has been characterized by a constantly increasing use of machinery and power. A large part of the momentum formerly supplied by human muscle now is furnished by steam, electricity, waterpower, or by internal combustion engines. Factory machinery in the United States in 1914 was driven by energy computed at 22,547,574 horsepower. This energy, it has been estimated, “represents the working force in a population three or four times as large as that of the United States.”²

¹ In comparing statistics for the years between 1916 and 1921 with those for earlier years, it must be remembered that during the period of the World War and the years immediately following, prices were extraordinarily high. A large increase in value of products, therefore, does not necessarily mean a correspondingly large increase in output. The figures on manufactures given in the census year are for the preceding year; that is, the 1920 census reports the facts for the year 1919.

² Economic Development of the United States, by Isaac Lippincott, p. 425.

This tendency is illustrated by the tabulation of manufactured products, printed on page 242. The table shows that the number of workers in factories was about seven times greater in 1920 than in 1860. The amount of capital, however, in the same period multiplied more than forty times, and the value of the products more than thirty times. This use of capital, largely in the shape of machinery and power, to aid the strength of the human worker and increase the amount of the product, has had profound effects for the benefit of labor and of the public at large. It has added to the returns from which wages of labor are paid, and to the stock of goods available for distribution to the community. As we shall have occasion to note in our later study of labor conditions, the improved state of the workingman is due largely to this gain in production, which, in turn, has been a direct result of the increasing application of capital to manufacturing industry.

Another important tendency is the increasing concentration of machinery and capital. Year by year, the small shop has made way for the factory, and the small factory has been replaced by the large one. In the table of statistics just given, it is noteworthy that between 1870 and 1920 the number of manufacturing establishments in the United States increased only slightly, in spite of the enormous gain in number of workers and in value of product. The system of incorporation has permitted the consolidation of huge sums of capital under one management. This tendency toward concentration of money, machines, and management has added greatly to the productive power of manufacturing enterprise. Its financial and social effects have been various; some of them will be observed in later chapters.

With concentration of capital and machinery, and with improved facilities for transportation, has come a greater localization of industry—that is, manufactures of similar type have come to be grouped in a few advantageous centers.

Familiar examples are found in the concentration of the automobile industry in Detroit, of silk manufacturing in Paterson, New Jersey, and of the packing industry in Chicago. This grouping has resulted from several causes. At times it has been almost wholly accidental—a result of local conditions which prevailed at an earlier period, or of the mere fact that a business grew up in some particular state or city. More often, however, there have been sound economic reasons, such as nearness to raw materials and markets, facilities for transportation and power, and an abundant labor supply. In general, manufactures have tended to centralization along the Atlantic seaboard and in a few large inland cities, such as Pittsburgh, Chicago, and Detroit.

Another tendency which has had an important effect upon the development of manufacturing industry is the increasing use of immigrant labor. The steel industry depends for its more laborious processes largely upon the labor of foreigners. The clothing industry is manned to a great extent by Russian and Polish Jews. Other enterprises are similarly dependent upon foreign labor. This fact has added to the complexity of present-day labor problems.

There remains to be noted one more tendency; that is, the utilization of by-products. We already have observed the advance made in the coke industry, by the adoption of the by-product oven (see Chapter XXIII, page 234). Another familiar example is the meat packing industry, in which the use of materials formerly classed as waste has been carried to a surprising degree. Many a manufacturing enterprise of today would be harmlessly bankrupt except for the profitable use of by-products which a few years ago were carted away as refuse.

Textile Manufactures.—Textile manufactures, the earliest to be conducted on a large scale and by methods resembling

those of the present day, are still among the most important, both in volume of output and in number of workers. The census of 1920 showed textile fabrics and materials to a total value of \$5,481,883,549, which was exceeded in the manufacturing list only—and very slightly—by the value of animal products. In the 1910 census the value of textiles produced in 1909 was given at a total of \$1,684,636,499. This was an increase from \$532,673,488 in 1879; \$759,262,283 in 1889; and \$931,494,566 in 1899.

The manufacture of textiles as at present conducted includes the weaving of goods of cotton, wool, and silk, the knitting of hosiery and other products, the spinning and weaving of flax, hemp, and jute, and various dyeing processes. Of these cotton manufactures hold first rank, with wool second. The census of 1920 showed the total value of cotton manufactures in 1919 as \$2,125,272,193, an increase from \$701,300,933 in 1914, and \$628,391,813 in 1909. The value of woolen manufactures in 1919 was \$1,234,657,092, and that of silk manufactures was \$688,469,523.

An interesting development of recent decades is the growth of a cotton manufacturing industry in the south. Until after 1870 the cotton raising states had been content to ship their raw product to the northern cities or to Europe for manufacture. Beginning with about that date, manufacturing establishments began to spring up in various southern states, particularly in North and South Carolina and Georgia. In 1914 the cotton manufactures of the three states named reached a total value of about \$229,000,000. The textile industry of the south has been favored by nearness to the supply of raw material, and by lower labor costs than those in New England, the original seat of the industry in America.

Except for the establishments in the south, the textile industry is centered mainly in New England, New York, New Jersey, and Pennsylvania.

The Clothing Industry.—Until after the Civil War the use of ready-made clothing by either men or women was relatively rare. The custom tailor and the hired dressmaker supplied raiment for practically the entire population. Such garments as were manufactured for sale were mostly of cheap material, of crude design, and intended for workpeople, free or slave. After the Civil War, however, the ready-made garments, improved in quality and style, gradually came into general use. In recent years the production of clothing has grown to enormous proportions, and has become centralized in a few large cities or "markets," such as New York, Chicago, Baltimore, Rochester, Boston, and Philadelphia.

Another important manufacture is that of boots and shoes, which has made large growth since 1860.

The Meat Packing Industry.—Among manufactures of foods, first rank is held by the preparation of meat products. The growth of the meat industry has been one of the most significant facts of American industrial development, and in some respects is typical of the manner in which the affairs of everyday life have been affected by business changes. Within the memory of most persons of middle age, a large part of the meat consumed in the United States, particularly in the smaller towns and the rural communities, was killed in small slaughter houses and prepared for the market by the same local butchers who dispensed it over the counters of their shops. Today, families in New York City and on the plains of Wyoming are likely to eat beef which has been killed and prepared in a huge Chicago or Omaha packing plant, and shipped, after inspection by government officials, in refrigerator cars to the distant markets.

The term "packing industry" has survived from the day when the business consisted of curing—that is, salting or smoking—pork and packing it, in barrels or otherwise, for

sale or shipment. As early as the seventeenth century, pork was thus cured in New England and packed for export to Europe. The first packing house in the west was established at Cincinnati in 1818. From that date, meat packing has been mainly an industry of the middle west. It was given an early impetus by the demand of the New Orleans market for meat from the Ohio Valley, in the years before the Civil War when much of the south devoted itself to cotton culture to an extent which prevented it from even producing food for its own people. (See Chapter XVI, page 164.) At present, the packing industry is centered mainly in Chicago, Cincinnati, St. Louis, Omaha, Kansas City, and Milwaukee, and the greater part of the business is under the control of a few large corporations.

The real growth of the packing industry dates from the early seventies, when improvements in methods of chilling or freezing the meat, and especially the adoption of the refrigerator railroad car, made it possible to extend the scope of the industry and broaden the market. From a trade in which only cured pork was shipped to any considerable distance, there has developed a business which sends fresh meat of almost every variety not only all over the United States but to distant foreign markets. With the growth of the industry have come improvements in manufacturing processes and in government inspection, which have added greatly to the quality of animal food furnished to the public.

With the increasing value of livestock and with a constantly growing demand for choice portions of meat carcasses, the packing business has developed efficiencies and economies which have been the wonder of the modern industrial world. The use of by-products formerly classed as refuse has been among the most noteworthy of the economies practiced. In a modern packing house practically every part of the slaughtered animal—hoofs, horns, blood, hair, bones, and intestines—

is put to some profitable use. The system of receiving and butchering animals has been placed upon such a scientific basis that it has been said that if a beef steer has to be kept alive long enough to require one additional feeding, the profit on that animal is lost.

The census of 1920 showed the products of slaughtering and meat packing at a total value of \$4,246,290,614. The total of all animal products was \$5,573,255,972, and the grand total of manufactured food products was \$12,438,890,851.

Manufacture of Other Food Products.—While meat packing leads among the manufactures of food products, other industries are of much importance. Among these are the flour and grist mill business, which in 1909 accounted for an output of \$883,584,000, and in 1919 to an output of \$2,052,434,385. In 1909, bread and other bakery products were valued at \$396,865,000, and in 1919 at \$1,151,896,318.

Machinery and Automobiles.—The growth of the iron and steel industry was traced in the preceding chapter. For a market for its finished products, the steel business is indebted largely to the manufacture of various types of machinery. Agricultural implements, bicycles, typewriters, locomotives, automobiles, and tractors have made enormous demands for steel. Building operations also account for a huge steel output, in the form of structural framework.

From small beginnings, the manufacture of agricultural machinery (see Chapter XIII, page 134; Chapter XX, page 205) has grown into a huge industry, the products of which are sent all over the country and to almost every part of the civilized world. The value of agricultural implements manufactured in the United States increased from \$20,831,000 in 1859 to \$101,207,000 in 1899, and \$304,961,000 in 1919.

One of the most amazing developments of the first quarter

of the twentieth century has been the growth of the automobile industry, which has sprung from obscurity to a place among the most important enterprises of the country. Through the development of the automobile the everyday life of the people has been profoundly changed, small communities have been transformed into busy manufacturing centers, and a whole new interest in the improvement of highways has sprung up. The census of 1900 gave a total production of 3,700 motor cars, with a wholesale value of \$4,750,000. By the census year 1910 the number had reached 127,731, with a value of \$165,148,529. The production in the calendar year 1920³ was 2,205,197, with a value of \$2,232,927,628; in 1921 the output was 1,668,550, with a value of \$1,260,000,000. In 1921 it was estimated that there were 10,448,632 motor cars in the United States, of which 1,127,482 were trucks. In 1922 the total number of motor vehicles was 12,239,114, of which trucks numbered 1,375,725.

TOPICS FOR REVIEW AND DISCUSSION

1. What were some of the causes for the growth of manufactures, particularly after the Civil War?
2. What have been some of the significant tendencies in modern manufacturing in the United States?
3. Why are some manufactures centered in a few localities? Give examples.
4. What is a by-product? Give some examples of the use of by-products in American manufacturing.
5. What are the textile industries? Trace the growth of this branch of manufacture from colonial times to the present. (See also Chapters III, VII, XIII, XIX.) Why has textile manufacture grown up in the south in recent years?
6. What was the origin of the American meat packing industry? Trace its development to the present time.
7. In recent years there has been increased interest in water-

³ The figures quoted for the calendar years 1920, 1921, and 1922 are furnished by the National Automobile Chamber of Commerce.

power, mainly for the production of electricity, and in the transmission of electric power generated by steam to manufacturing points distant from the fuel supply. What are some of the reasons for this?

8. What are some of the reasons for the increasing use of ready-made clothing?

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CHAPTER XXV

THE ADVANCE OF THE AMERICAN WORKER

Growing Importance of Workers.—The industrial and financial development of the period following the Civil War brought profound changes in the condition of the American working man. We have observed (see Chapters IV, VII, XIV, XVIII) the gradual emergence of a more or less distinct class of industrial workers. This class, at first unimportant in numbers compared with the large majority of the population engaged in agriculture and trade, grew in number and in influence as manufactures increased and more and more men were needed to furnish a labor supply for the developing industries—manufacturing, mining, transportation, and others. As the numbers of workers increased and their interests began to be looked upon as separate from those of their employers, a movement toward organization set in, which had reached considerable proportions before the outbreak of the Civil War, and which as we have seen (see Chapter XVIII, page 185), was given further encouragement by the conditions of the war period.

Increase of Industrial Population; Changing Conditions of Labor.—Agriculture was the vocation of the majority of Americans gainfully employed up to the beginning of the Civil War. By 1880 the preponderance of agriculture had diminished until only a little more than 44 per cent of the population was engaged in that occupation. By 1920 the portion of the population engaged in agriculture had fallen to slightly over 26 per cent, while those engaged in manufacturing and transportation had risen to about 38 per cent.

As the number of industrial workers increased, their conditions and their relations to the rest of the community were changed in important particulars. With the evolution from small shops to large factories, and with the growing need for large aggregations of capital in order to promote independent enterprises, the status of the worker became more nearly fixed, as it long had been in the older countries of Europe. There was less probability that the hired workman would become an independent proprietor. John Mitchell, a prominent leader of union labor, writing of conditions at a comparatively recent time, said:

The average wage earner has made up his mind that he must remain a wage earner. He has given up the hope of a kingdom to come, where he himself will be a capitalist, and he asks that the reward for his work be given him as a workingman.

Another force working in the same direction is to be found in the fact that the change from wage-earning to agriculture has become less easy than it was in earlier periods. We have had occasion to note (see Chapter X, page 103) that for many years the man unsatisfied with his conditions found a ready way of escape by securing a piece of land and becoming a farmer. This condition had important effects upon the development of the country. To some extent it still exists; in later years, however, it has become less easy for the man without resources to become the tiller of his own land. The most desirable of the public lands have long since passed into private ownership, and the value of improved land has risen until it is beyond the reach of the average workingman, unless he possesses unusual qualities of ambition and patience.

It should not be understood from what has just been said that the opportunities for the American laboring man to better his condition have passed, or that society has come to be

grouped into classes from which the individual has no chance of escape. Every great industry furnishes abundant examples in proof of the contrary. Compared with conditions in the middle years of the nineteenth century, however, the probability that a wage-earner will continue permanently in that class is relatively great. *

The Rise of Capitalistic Production.—Reference has been made to the need for large aggregations of capital to conduct modern productive enterprises. This fact, one of the most significant in connection with the industrial development of the present day, has had results of the greatest importance to the laboring man. A student of labor conditions has written: ¹

It is by no means unfamiliar to hear modern industry characterized as capitalistic. The significance of this is not to be overlooked. Production is indirect. Tools have yielded to machines. These in turn have grown more complex and interrelated until machinery has a meaning somewhat different from machine. Further, machinery has merged into plants. These vast complexes of capital goods dominate modern industry. In them is carried to a point hitherto undreamed of the division of labor and the subdivision of processes. There are many meanings to such a situation. One is that labor has been made more dependent upon conditions.

In thus becoming "more dependent upon conditions" the workman has lost much of his original freedom of action. In few trades is he now able to set up a little shop and become his own boss. In the vast majority of cases he must find a place to work in a plant owned by another man—or by a set of men—and often managed by still another man—or set of men. Moreover, under present conditions the workman is

¹ An Introduction to the Study of Organized Labor in America, by George Gorham Groat, p. 59.

likely to become a specialist in a single minute fraction of a productive process, and never acquire the all-round skill which would enable him to work independently, even if financially he were able to do so.

Improved Conditions of Workmen.—If the American workingman has thus lost a part of the independence which in an earlier period was among his most valued possessions, he has made important gains in material comforts and benefits. Few workmen of the twentieth century would be willing to exchange conditions with their ancestors of fifty or one hundred years ago. Most important, perhaps, in the mind of the average workman has been the steady increase in wages. With occasional set-backs in times of business depression, and with occasional readjustments when the purchasing power of money has advanced, the tendency of wages has been upward. This advance of wages has been greater in the long run than the increase in the cost of living.

For this increase in "real" wages—that is, wages in terms of their purchasing power—there have been many causes. To some extent rising wages have been due to the increasing humanitarian sentiments of the public and of employers. A somewhat stronger element has been the growing power, both in persuasion and in combat, of labor organizations. Most potent of all, however—and this fundamental fact needs to be kept constantly in mind, however much it may be at variance with some theories of industrial and social evolution—has been the increasing production, which has been due, as was pointed out in the preceding chapter, largely to the greater use of machinery and capital and the better efficiency and intelligence of labor and management.

As to the just shares of worker, manager, and owner in the earnings of industry, men probably will continue to disagree. There can be no argument, however, against the mani-

fest truth that industry cannot divide more than what it has; that the total output is the limit beyond which the aggregate earnings of labor, of capital, and of management cannot go. Historically as well as logically, the condition of the wage-earner has improved as the use of machinery, with its larger output, has increased. Naturally, this rule is not always to be tested by temporary conditions in a transition period. The Industrial Revolution in England for a time resulted in the exploitation of workingmen, although even in that period it is open to question whether the beginning of the factory system made the condition of English workers, even temporarily, much worse—if worse at all—than they had been during most of the period after the beginning of the sixteenth century. In the long run, however, every improvement in machinery and process and every gain in efficiency has been reflected in greater earnings and better conditions for the human element in industry. Along with the increase in wages has come a shortening of the average working day. In the earlier national period it was common for wage-earners to toil from sunrise to sunset, or, in other industries, 12 or 14 hours a day. One of the earliest efforts of organized labor took the form of a campaign to reduce the hours of work to 10. In 1860 this effort had gained moderate success, and the average industrial working day was not far from 11 hours. By 1880 the average was scarcely over 10 hours, and by 1905 it was about 9½ hours. Since then there has been further reduction, until by the close of the World War the eight-hour day had become firmly established in most industries and had come to be looked upon as the normal working period. Exceptions were found in the steel industry, where many continuous processes (that is, processes where the machinery is constantly in operation) were still conducted in many plants on a basis of the 12-hour "shift" for the workman, and in certain industries in which the working day had been reduced to less than an average of 8 hours.

Legislation for the Benefit of Labor.—The improvements in the workman's condition brought about by changing economic and industrial systems have been hastened in many instances by legislation. At the close of the Revolution practically no laws for the special benefit of the workingman were in existence, and, on the contrary, various efforts had been made to restrict his liberties by statute or by the interpretation of "common law." Particularly, all combinations of laborers designed to improve their conditions or wages often were held to be illegal conspiracies. These harsh restrictions soon disappeared, but up to the close of the Civil War practically no legislation designed specifically to benefit the workman had been enacted by the United States government or by the states.

In 1866 Massachusetts led the way toward a more enlightened public policy by enacting a law to protect children in industry. Within a few years, that state had established a bureau of labor, had limited the work of women and children to ten hours a day, and had created a system of factory inspection to determine the conditions under which workers were employed.

Within the last fifty years important advances have been made in labor legislation, sometimes by the federal government but more often by the states.² In most states women and children in industry are given special protection as to their hours of labor, their working conditions, and their health. Somewhat similar protection has been given to men engaged in unusually dangerous or unhealthful occupations. Most states provide factory inspection, and some limit the hours of work, at least in certain industries, and fix minimum wage scales.

Laws have been enacted in some states providing for either compulsory arbitration or public investigation of disputes be-

² Through constitutional limitations, as interpreted by the courts, the powers of the federal government in dealing with labor conditions have been sharply restricted. In the main, such regulation is held to be one of the rights reserved to the states.

tween employers and employees. The state of Kansas in 1920 took an advanced step by the establishment of an industrial court, with authority to prevent the cessation of work, through strikes and lockouts, in industries declared to be vital to the public interest.

One of the most valuable legal safeguards for the workman is that provided by the laws of many states regarding the payment of compensation in case of injuries suffered while at work. Until this legislation began to be enacted, the workman who suffered an injury generally had to prove that the employer was responsible before he could collect damages. This usually was difficult, especially as the laborer generally lacked funds for protracted fighting in the courts. The old laws threw many safeguards around the employer, who often found it easy to show that the workman himself, or a "fellow servant," was responsible for the injury. More modern legislation in most states has wholly changed this situation, by making the employer legally responsible for practically all injuries to workmen. This has been of immense benefit to laborers and their families, and has been accepted willingly by many employers.

Workman's compensation legislation, however, has had the effect of causing many employers to refuse to hire men not physically sound, or those of advanced years. Employers point out that if they are to be held financially responsible for injuries to their workmen, they must protect themselves by hiring from among the available laborers, those who are least liable to injury. Partly for this reason, many corporations require applicants for employment to undergo physical examinations, and some of them have established maximum age limits for employment, occasionally refusing to hire men who are above 35 years old. These restrictions upon employment have generally been opposed by labor organizations.

Of the federal legislation for the benefit of labor, perhaps the most important was the statute which established in 1884, the United States Bureau of Labor. In 1913 the Bureau was expanded into a department, under the direction of a Secretary of Labor.

Effects of Improved Labor Conditions.—The improvements in the conditions of labor have had important results. Naturally, the greatest benefit has come to the workman himself and to his family. The average laboring man of today enjoys comforts and luxuries unknown to his ancestors; in fact, the everyday comforts of the American workman's home include many luxuries unknown to any class of society seventy-five or one hundred years ago. With higher wages and more time for rest and recreation, the workman and his family are able to take a better position in the community, and to provide more self-improvement than in the past. Particularly has it become possible for the workingman to give his children educational and social advantages beyond the dreams of the average toiler of the early nineteenth century.

But the community in general has reaped a part of the advantage from the improved condition of the laborer. With wages which in most instances provide quite generously for the necessities of life and leave a surplus for luxuries and amusements, the wage-earner has become one of the most important patrons of the merchant, the manufacturer, the railroad, and the theater. The laborer is one of the principal purchasers of food, of clothing, and of transportation. When for any reason his purchasing power is diminished, the adverse effect is felt in every department of business.

The later nineteenth and the earlier twentieth century have been marked by many outstanding achievements in industry and in society. Few of these achievements, however, have been more important or more genuinely beneficial to all classes

than has been the advance in the condition of the American workingman.

TOPICS FOR REVIEW AND DISCUSSION

1. Trace the progress of the laboring class up to the Civil War. (See Chapters IV, VII, XIV.)
2. What are some of the changes in industrial methods which have affected the condition of the working man?
3. Why has it become more difficult than in the past for the wage-earner to become an independent proprietor? To become a farmer?
4. What has been the general tendency of wages? Of hours of work?
5. What are some of the most important features of present-day labor legislation?
6. What is workmen's compensation? How have recent laws changed the custom in this respect?
7. What do you understand by the "capitalistic" system in industry?
8. Has the growth of large-scale industry been, in the long run, a benefit or a disadvantage to the workman?
9. Why has most of the legislation for the benefit of labor been enacted by the states rather than by the federal government?

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CHAPTER XXVI

THE DEVELOPMENT OF LABOR ORGANIZATION ¹

Advance of Union Movement.—Along with the increase in the number of men and women engaged in industrial labor and the improvement in their conditions, has come a gain in the magnitude and power of the union labor movement. We have learned (see Chapter XVIII, page 185) that the Civil War, by increasing the demand for manufactured products and for labor, and by withdrawing many men from industry, encouraged the extension of the movement in favor of trade unionism.

The period of greatest growth in union membership and influence, however, began after the close of the Civil War. The changing conditions of industry already outlined (see Chapter XXV, page 251), combined with the steadily swelling stream of immigration which threatened to lower standards of wages and living conditions, inclined the laboring classes more and more to draw together in organizations for self-defense, or for aggression toward their employers. Accordingly, in the decades following 1860 we see gains for unionism, interrupted at times during periods of business depression and unemployment, but representing on the whole a distinct advance. In the prosperous times during and immediately after the World War, it is likely that more than 5,000,000 men and women were enrolled in organizations properly to be classed as labor unions. In its periods of greatest strength, however, the union movement has included in its membership only a minority of the persons engaged in labor in the United States.

¹ It is suggested that at this point the student review the general principles of labor organization outlined in Chapter XIV.

The National Labor Union.—Attempts to form nationwide organizations of workmen, including those of different trades, were relatively unimportant before the Civil War, and the activities of such federations as were formed usually were political rather than industrial. Organization of individual trade unions into city federations and assemblies, however, was common. By the close of the war such organizations were in existence in most of the important centers.

Beginning in 1864 an attempt was made to form a national federation with these city assemblies as its units. In that year the Industrial Assembly of North America was held at Louisville, and in a similar convention held at Baltimore two years later there was organized the National Labor Union.

The National Labor Union for a time had a rapid growth, and was influential in securing improved conditions. In particular it aided in the passage in 1868 of a federal statute making eight hours the standard working day for government employees. It is probable that the efforts started by the organization had something to do with the later establishment of the United States Bureau of Labor. Early in its career, however, the National Labor Union departed from the principles of regular trades unionism and became involved in various political and reform movements. As a result, it was deserted by large numbers of trade unionists who believed that labor activities should be limited to strictly industrial aims and methods, and by the year 1872 it had almost ceased to function.

The Knights of Labor.—Before the downfall of the National Labor Union there had already been founded another organization which was to be the first of the nation-wide societies of workmen to gain large membership and to exercise a really powerful influence upon the thought and actions of the people of the country. This was the Knights of Labor. It

was organized in Philadelphia in 1869, through the efforts of Uriah S. Stephens and six other men, all garment cutters.

The Knights of Labor was organized on "industrial" rather than "trade" lines (see Chapter XIV, page 143); in fact, its structure was rather that of an "all-labor" union, in that it sought to enlist all laboring men in one organization. In functional type it was "idealistic" rather than "business." (See Chapter XIV. page 144.) Its purposes included the referendum for enacting laws; the creation of bureaus of labor to collect information for the benefit of the working classes; the single tax; laws to protect the health and safety of workmen; indemnification of workmen for injuries received through lack of proper safety appliances; compulsory arbitration of labor disputes; a graduated tax on incomes and inheritances; a postal savings bank.

It is a significant commentary upon the changing trend of public and political sentiment to observe that these principles, when advanced by the Knights of Labor in the sixties and seventies, were looked upon as dangerously radical. In our own day they are commonplace. Many of them, in fact, long since have been adopted, and in some cases present-day practice goes far beyond the proposals made by the Knights of Labor.

It should be remembered that the program of the Knights was not wholly original with that organization. Many of its demands had previously been made by other labor or political bodies.

The organization of the Knights of Labor at first was secret, and was modeled to some extent upon that of the Masonic order. Even the name was not divulged to the public. This secrecy aroused suspicion and hostility, and after a few years the secret regulations of the organization were abandoned.

At first the organization grew slowly. At the end of the

first three months it had only 28 members, and for several years its size was not impressive. After about 1875, however, the membership and influence of the Knights of Labor spread in a manner up to that time unheard of in a labor body. By 1886 the organization had enrolled more than 700,000 members. At times it claimed more than 1,000,000. Soon after that, however, it entered upon a decline as rapid as had been its growth. Partly through internal dissensions and factional quarrels, partly through its inability to win and hold the allegiance of the more skilled tradesmen, the society began to lose in numbers and in power. By 1898 it had fallen off to about 100,000 members, and soon after that it practically disappeared.

The American Federation of Labor.—The downfall of the Knights of Labor was hastened by the swift growth of a rival and quite different organization, the American Federation of Labor. In 1881 a call for a labor convention was issued by the Knights of Industry, a struggling organization with members in Missouri and Illinois, and the Amalgamated Labor Union, a seceding branch of the Knights of Labor, with members in Indiana and Ohio. The convention was held at Terre Haute, Indiana, in August, but a disagreement arose over the form of organization, and the delegates adjourned to meet at Pittsburgh in November of the same year. At this second meeting there were 107 delegates, claiming to represent 262,000 workmen. These delegates formed the Federation of Organized Trades and Labor Unions of the United States and Canada. With a slight change of organization in 1886, the society was renamed the American Federation of Labor.

In structure and functions the American Federation of Labor is the exact opposite of the Knights of Labor. It is a loose confederation of self-governing unions, most of them

of the trades rather than the industrial type.² The Federation itself has not authority to call a strike or to end one, although its officers exercise a powerful influence upon the separate unions of which it is composed. In the main, the Federation has favored "business" unionism rather than revolutionary or political activities.

At first small and weak in comparison with the imposing magnitude of the Knights of Labor, the Federation grew rapidly, eclipsed its older rival, and became the dominant labor organization of the country. In 1899 it had about 300,000 members; in 1904 it had 1,650,000; in 1919, more than 3,000,000. In June, 1920, it had a membership of 4,079,000. The business depression of 1920 to 1922, however, by causing widespread unemployment, occasioned a falling off in membership. In June, 1921, the Federation had 3,907,000 members; a year later it counted 3,196,000.

At the national convention of the Federation of Organized Trades and Labor Unions of the United States and Canada in 1883, the society elected as its chairman Samuel Gompers, a cigar maker of English birth who in 1864 had become the first registered member of the Cigar Makers' International Union. He has continued at the head of the Federation except for one year, when, in 1894, John McBride was elected president. Throughout his numerous terms as president, Gompers has exerted his influence in favor of the trade union form of organization and business unionism.

The Industrial Workers of the World.—One more national organization of workmen remains to be considered. This is the Industrial Workers of the World. It represents the most nearly revolutionary type of activity which has yet been sponsored by an important labor organization in the United States.

² There are a few important exceptions, among which the most noteworthy is the United Mine Workers of America, an industrial union.

Its structure is of the all-labor or "one big union" type, and it seeks to unite all workingmen in a single organization. Its strongest appeal usually has been to the unskilled.

The Industrial Workers of the World was organized in Chicago in 1905, at a convention called by a group of individuals representing various radical organizations and types of thought. The principal organizations entering into the composition of the new society were the Western Federation of Miners (since withdrawn and reorganized as the International Union of Mine, Mill and Smelter Workers), the American Labor Union, and the Socialist Labor party (to be distinguished from the Socialist party, with which at that time it was engaged in a bitter feud).

A second convention was held in 1906, when there was a split between the more radical and the less radical faction, with victory for the former. The Western Federation, which had supported the losing side, withdrew, thus depriving the Industrial Workers of the World of its strongest individual union. In 1908 there was a contest between the Socialist Labor faction, which favored political methods, and the non-political group, which sought "direct action" through strikes or otherwise. The latter party won, and the Socialist Labor wing withdrew, later forming a separate organization, at first called the Detroit Industrial Workers of the World and later the Workers' International Industrial Union.

The Industrial Workers organization at various times has exerted a strong influence, particularly among the less skilled and more ignorant workers. It reached what probably was its greatest strength in 1912, when it took the leadership in a strike of textile workers in Massachusetts. During the World War it was prominent in anti-military activities, and a number of its leaders were convicted in federal courts. In 1921 and 1922 its campaigns were carried on largely among workers in harvest fields and wood cutters in lumber camps. For a

number of years, however, the influence of the organization had been on the decline.

TOPICS FOR REVIEW AND DISCUSSION

1. How does a trade union differ from an industrial union? From an all-labor union? How does business unionism differ from revolutionary unionism? (Chapter XIV.)

2. Trace the growth of unionism up to the close of the Civil War. At what periods were unions strong, and at what periods weak? Why? (Chapters XIV, XVIII.)

3. What was the National Labor Union? What were some of the causes for its decline?

4. What was the Knights of Labor? When was it founded and what were some of its principles? Trace its growth and decline.

5. Describe the method of organization of the American Federation of Labor. For what types of unionism does it stand?

6. What is the Industrial Workers of the World and what kind of unionism does it represent?

7. Why has the American Federation of Labor been more powerful and more permanent than the Knights of Labor?

8. What do you consider is the present tendency of American unionism as to: (1) growing or declining strength; (2) business or revolutionary unionism; and (3) political activity?

9. Study in an encyclopedia or other reference work the life of Samuel Gompers; report on his activities in behalf of unionism.

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CHAPTER XXVII

LABOR ANTAGONISM AND ITS RESULTS

Results of Labor Development.—The changing labor conditions described in the preceding two chapters have had results of profound significance in the relationships between employer and employee. They have brought into being some of the most perplexing problems which confront American industry. Today industrial management and the public at large are growing into a realization that with the solution of those problems is bound up the material prosperity of America and the attainment of justice and happiness by its people. Moreover, it is coming to be understood that this solution depends in large measure upon a genuine understanding of the principles involved and of the individual and class ideas and prejudices which add complexity to the situation.

It is for this reason that in our study of economic history much attention has been given to the development of labor and employment relationships. We have observed the changing conditions of the American workingman and the rise of organizations which, however much they may have differed in structure and methods, have all had as their purpose the elevation of the worker's status in relation to that of other classes of society.

In recent years, a few definite tendencies in this evolution of the working class may be traced. We already have noted the change in general industrial and agricultural conditions, as a result of which the wage-earner has become relatively fixed in his place. A second tendency has been the increasing organizations of both employers and employees, their segregation in two camps, and the growing opposition of their apparent

interests. This has led to industrial unrest, antagonism, and occasional armed conflict. Partly as a result of this widening gulf between employer and employee, society, in the person of state or national government, has shown a growing disposition to protect its own interests by a greater and greater degree of supervision over industry. Of this tendency the end is not yet in sight.

This governmental supervision represents one aspect of the efforts which are being made to adjust the relationships between labor and capital.¹ Another aspect is represented by the numerous attempts, especially in very recent years, to bring about direct negotiation, through one method or another, between employer and employees.

Before observing in detail these efforts to solve the problems growing out of the employment relationship, it will be profitable to turn our attention to some features of the antagonism between the parties in industry, in order that we may better understand the elements of the problems themselves.

Growing Antagonism between Labor and Employers.—

It is likely that from the time when men first began to hire other men to work for them, there was an opposition of interests between the "master" and the "servant." We saw in Chapter I how this opposition grew up in England even in the Middle Ages. As the workmen gained more power, this opposition of interest came to be of larger and larger importance in the minds of both employers and employees. Thus for many years the strife between workmen and management grew more bitter. This bitterness was intensified by the increase in the power of labor organizations and in that of the large employing corporations and combinations of employers.

¹ It is proper at this time to call attention to the fact that the conflicts of labor are less frequently with capital—the stockholders who own the enterprise—than with management. By "management" is meant the directors and officers who are in active control of a business. Often the officers own no stock or bonds, and thus have no financial investment in the corporation, but simply are hired to operate the industry.

We have noted that beginning about 1850 there was a series of strikes, exceeding in number and importance any that had gone before. This labor activity was checked by the panic of 1857, with its resulting unemployment. When labor organizations entered upon their period of rapid expansion after the Civil War, they again turned to the strike as a means of enforcing their demands upon employers. The employers, in turn, had recourse to the lockout and the blacklist.²

Most of the labor controversies from the Civil War to the present time have been wholly or in part over wages or hours of labor. The workmen have sought higher pay and shorter hours. The employers often have attempted to prevent the increase of wages, and sometimes, especially during business depression, have tried to reduce them. Especially in more recent years, however, many strikes have been over the question of union recognition or the open or closed shop.³

These types of labor dispute may be illustrated by conditions during and after the World War. In the period of active business and keen demand for labor between 1916 and 1920, unions gained in strength and influence, and in many instances secured higher wages, shorter hours, or union recognition—sometimes all three. In the period of business depression beginning in 1920 and continuing through 1921 and 1922, employers in many industries sought to reduce wages and sometimes to lengthen the hours of work. At the same time, many employers declared in favor of the open shop. The unions resisted these attempts, and many strikes resulted. These strikes had different results, depending in part upon

² When the employer in a labor controversy discharges his workmen, or closes down his establishment to throw them out of employment, his action is called a "lockout." This is the opposite of a strike, in which the workmen themselves seek to halt operations. A "blacklist" is a list of men whom an employer refuses to hire. Sometimes, it has been charged, blacklisted men are refused work by all the employers in an industry. The blacklist often has been resorted to as a means of punishing men who have been especially active in union organization.

³ "Union recognition" is the term applied to the method of bargaining in which the employer deals directly with the labor organization. For a discussion of the open and closed shop, the student is referred to Chapter XIV, page 145.

the relative strength and economic advantages of workers and employers, and in part upon the direction of public sentiment in its belief as to the justice of one or the other cause. With the improvement of industrial conditions in the later months of 1922 and the early months of 1923, labor began again to gain the ascendancy, and there was an upward trend in wages.

It is beyond the scope of this book to describe, even briefly, any considerable number of the strikes which have marked the history of industrial relations in the decades since the Civil War. A few, however, which illustrate some of the tendencies of the conflict, may be examined.

The Railroad Strike of 1877.—The panic of 1873 was followed by several years of depressed business, hard times, and unemployment. As a means of weathering this period of adversity, many employers sought to reduce the wages of their workmen. Among these employers were some of the railroads. These corporations, besides being among the chief sufferers from the general business depression, had undergone a severe reduction of earnings as the result of a series of rate wars (see Chapter XXI, page 217) during which freight and passengers often were carried for less than it cost to run the trains. Early in 1877 the principal railroads operating between the eastern seaboard and the middle west announced that the wages of workmen would be cut 10 per cent. Although the railroad employees at that period generally were not organized, many of them resisted the wage cut, and one of the most serious strikes in the history of the country followed.

The strike was started by locomotive firemen employed by the Baltimore and Ohio Railroad at Martinsburg, West Virginia. These men abandoned their engines and induced many other workmen to join them in resisting the wage reduction. The strike spread to other points on the road, and the management, unable to keep trains running, called for state aid. The

governor of West Virginia sent state troops to points of danger, and called upon the United States government for federal regulars. These were furnished by President Hayes. Rioting spread to Maryland, and the militia of that state was dispatched to various points on the line. At Baltimore, in a clash between state troops and a mob numbering several thousand, a number of rioters were killed. A force of United States troops restored order in Baltimore, and gradually the riots in West Virginia and Maryland were put down.

In the meantime trouble of an even more serious character had started at Pittsburgh. The Pennsylvania Railroad had announced the wage cut, this being the second reduction of 10 per cent in wages on that system. In addition to the reduction of wages, the railroad management sought to economize by diminishing the numbers of men employed to operate certain trains. This order, rather than the wage cut, gave the signal for resistance. Many employees, especially at Pittsburgh, went on strike and undertook to prevent the passage of freight trains in and out of that city. Within a few days the Pittsburgh freight yards were in control of the strikers and their sympathizers, and freight traffic on that part of the Pennsylvania system was at a standstill. State troops were sent to the scene, but the detachments first arriving were too weak to cope with the rioters, or, in some cases, were in sympathy with the strike. A force of 650 militiamen from Philadelphia, arriving at Pittsburgh, July 21, 1877, fought a series of battles with the strikers, in which there was some loss of life. The troops were too few to restore order, and on the night of July 21 the city was practically in the hands of the mob. That night and the following day much railroad and other property was burned. Order finally was restored on July 23 through the co-operation of state authorities and citizens. Within a few days train service was resumed with the aid of United States troops.

Rioting occurred at other railroad centers, but in the end the strike was put down and the wage reductions generally went into effect. In this strike, as in many others both before and since, riots were the work less of the strikers themselves than of their sympathizers and of the lawless elements in the communities.

The Homestead Strike.—In 1892 the Carnegie Steel Company reduced wages of a portion of the working force in its plant at Homestead, Pennsylvania. The Amalgamated Steel and Iron Workers protested against the reduction, and a violent industrial conflict broke out between that organization and the steel company. The appearance of Pinkerton detectives at the steel plant was the signal for a series of pitched battles in which rifles, revolvers, and even cannon were used. Several men were killed on each side before order finally was restored by state troops.

The Homestead strike was put down. Its importance in industrial history lies not so much in the violence with which its progress was marked, as in the fact that it ended for many years the strength of unionism in the steel industry.

The Anthracite Coal Strike of 1902.—The coal mining industry has for many years contributed a turbulent element to labor history. In its very nature the work of the coal miner is toilsome and dangerous. In the early years of the industry this work was done under adverse conditions and with little regard for the well-being of the miner and his family. In a later period the problems were complicated by the increasing use of foreign labor, much of it from eastern and southern Europe. A considerable, but varying, proportion of the coal of the United States has for many years been mined under agreements between the mine owners and the United Mine Workers of America, a strong union of the in-

dustrial type. Numerous disputes, in which each side has been accused of violating the terms of these contracts, have led to bitter strife within the industry. The men who actually dig the coal generally are paid by the ton or the carload; other workers are paid by the day. In recent years wages of coal miners have been high, but in many cases their earnings have been cut down through unsteady work. This fact has further complicated the labor problems in the industry.

On May 15, 1902, anthracite miners of Pennsylvania to the estimated number of 147,000 went on strike, demanding higher wages, shorter hours, and recognition of the union. As the autumn season approached, the shortage of anthracite coal became alarming, prices soared, and serious suffering appeared imminent in communities which depended upon anthracite for their fuel supply.

At this crisis President Roosevelt determined to intervene to protect the interests of the public. On October 3 he called a conference of mineowners and union officers and urged a settlement. As a result of this conference, miners and mineowners consented to the arbitration of their dispute by a commission appointed by the President, and the strikers returned to work pending the award of this commission. The award, which went into effect April 1, 1903, was largely in favor of the miners. They were granted a wage increase amounting to one-half what they had asked, and received concessions in the matter of working conditions and virtual recognition of the union. It was estimated that the cost of the five months' strike, to miners and mineowners, was not less than \$100,000,000.

In this anthracite strike of 1902 we are struck, first, with the changed attitude of the government toward labor disputes. The position of President Roosevelt, in taking an active part in adjusting an industrial controversy, was wholly different from that, for example, of President Hayes in the railroad

strikes of 1877, when the federal activity was confined to keeping order and protecting lives and property. The action of President Roosevelt, in fact, gave a distinct impetus to the growing tendency of the government to assume more than a police power over clashing industrial interests, and to seek by direct means not only to preserve peace but to attain justice. A less important but more direct result of the settlement of 1903 was the establishment of the custom of handling disputes in the anthracite field by conciliation or arbitration.

The Steel Strike of 1919.—Following the defeat of the Homestead strike, unionism made little headway in the steel industry. By 1919, about a half-million workers were employed in the steel plants of the country, of whom the United States Steel Corporation employed about 275,000. A small fraction of these workers belong to the Amalgamated Association of Iron, Steel and Tin Workers, with which organization some steel producers had contracts. Others, who belonged to separate trades employed in connection with steel making, were affiliated with various unions. The vast majority, however, were unorganized. Steel workers' wages had been increased repeatedly during the period of the World War, and their working conditions had been improved, although in most of the larger plants the 12-hour day still prevailed in the departments in which operations were continuous. (An exception was in the steel plant of the Colorado Fuel and Iron Company, where an 8-hour day for all classes of labor had been in effect since November, 1918.)

At the annual convention of the American Federation of Labor at St. Paul in the summer of 1918, a committee was appointed to make a campaign for unionization in the steel industry. At the annual convention at Atlantic City in 1919, this committee reported that 100,000 steel workers had joined

unions affiliated with the Federation. After the Atlantic City convention the committee took a strike vote of the men in the various unions, and announced that this vote was 98 per cent in favor of a strike unless certain demands were granted by employers. The demands included the 8-hour day, an increase of wages, union recognition, the "check-off," or collection of union dues by the employers, the abolition of physical examinations for applicants for employment, and some other items.

Practically every steel company in the country rejected the demands, and a strike was called for September 22, 1919. The strike was effective in varying degrees at different steel centers. Some plants continued to operate with forces practically intact; some ran with diminished numbers of workers; and others were forced to shut down. The unions, however, generally were thought to have no chance of success. This belief was justified when, in January, 1920, the strike was declared off.

The Coal Strike of 1922.—The wages of coal miners, like those of steel workers, were advanced repeatedly during the period of 1916 and the close of the World War. Practically all the anthracite mines and a large proportion of the bituminous mines were unionized, and by 1921 the United Mine Workers of America had an average membership of more than 500,000. In the unionized districts the closed shop was strictly enforced, and under the check-off system the mining companies collected union dues, fines, and assessments out of the pay of the miners.

In the fall of 1919 the union bituminous miners went on strike, their demands including a large additional increase in wages and the limitation of work to 6 hours a day and 5 days a week. The number of workers involved in this strike was estimated at 395,000. It was called off in obedience to an injunction issued by a United States court on application of the

federal government. Later a commission appointed by President Wilson made an investigation of the coal mining industry and granted the bituminous miners a wage increase of about 20 per cent.

After the award of the bituminous coal commission, miners in both the unionized bituminous and the anthracite fields continued to work under contracts with employers, which were to expire April 1, 1922. In the meantime, a serious period of business depression had intervened, and wages had been reduced in many industries and in many of the non-union coal mining districts. As the time for the expiration of the union contracts approached, the owners of bituminous mines announced that they would insist upon wage reductions ranging from 20 to 40 per cent, the abolition of the check-off system, and the substitution of state or local agreements for those which included several states. The bituminous miners on their side demanded the retention of the check-off, the interstate contracts, and the prevailing wage scales, and renewed their demand for a 6-hour day and a 5-day week. The anthracite miners, whose wages had not been increased to the same extent as those of the diggers of bituminous coal, asked a wage increase of 20 per cent.

The conflict was actually precipitated by the refusal of the bituminous mineowners to enter conferences for the renewal of the interstate contracts, which the union claimed they were bound to do by the terms of the old contracts. A strike was called affecting the unionized miners in the bituminous and anthracite fields. This strike was effective April 1, 1922. In July, the United States Department of Labor estimated that 610,000 miners were on strike.

The strike was marked by several instances of violence, the most noteworthy being an attack by union miners upon mines at Herrin, Illinois, which were being operated with non-union men. In this battle 22 men were killed. Later a grand

jury indicted a large number of persons on charges of murder, five of whom were acquitted on January 19, 1923. In another trial, six defendants were acquitted on April 6. The remaining murder indictments then were dropped by the prosecutor.

Efforts to settle the coal miners' strike continued throughout the spring and summer, and as autumn approached the public became alarmed at the prospect of a shortage of coal. Before the situation had become critical, however, the strike was practically settled at a conference held on August 15 between representatives of the union and the owners of many of the coal mines in West Virginia, Pennsylvania, Ohio, Indiana, Michigan, Oklahoma, and Washington. At this conference, which was held at Cleveland, an agreement was reached, effective until April 1, 1923, under which the miners were to return to work at the former wages and working conditions, including the check-off. Agreement was made to take steps to settle upon means of wage-scale adjustment in the future. While the miners, in entering a conference with only a part of the mineowners, yielded a part of their contention as to interstate contracts, the settlement generally was looked upon as victory for the union. Mineowners in unionized districts not represented at the conference generally accepted the "Cleveland agreement," and coal mining was soon in progress in most parts of the country. The total cost of the coal strike was estimated at from \$500,000,000 to \$750,000,000.

During the period between the signing of the Cleveland agreement and the date set for its expiration, various efforts were made to determine upon a permanent basis for contracts between the union and the mineowners. Attempts to settle the question in conferences covering all the unionized coal mining districts of the country failed, and there were threats of another strike on April 1, 1923. Soon after the beginning of the year, however, a conference was held between the United Mine Workers and most of the employers in Illinois,

Indiana, and Ohio. At this conference it was decided to continue the existing wages and working conditions for another year. Within a few weeks most of the mineowners of the country had agreed to the terms of this settlement. Thus the danger of a strike was averted for the time being, but the whole question of permanent wage scales and methods of negotiation was left unsettled.

The truce of January, 1923, was arranged partly in response to pressure brought to bear by a United States Coal Commission which had been appointed by President Harding in the preceding year. This "fact-finding" commission had in the meantime begun an elaborate study of the conditions surrounding the coal mining industry, in an effort to stabilize demand, output, and employment and to eliminate some of the uneconomic conditions which for several years had taken a heavy toll from labor, capital, and the public.

TOPICS FOR REVIEW AND DISCUSSION

1. What were some of the causes of increasing antagonism between employers and workmen in the later years of the nineteenth and the early years of the twentieth century?
2. What is a strike? A lockout? A blacklist? A closed shop? Union recognition? The check-off system?
3. What were the causes of the railroad strike of 1877? Describe the progress of the strike and its outcome.
4. What was the Homestead strike, and what were its effects upon unionism in the steel industry?
5. What method was adopted by President Roosevelt in settling the anthracite strike of 1902?
6. How did the attitude of the United States government toward labor controversies change between the administration of Hayes and that of Roosevelt?
7. What were some of the demands in the steel strike of 1919 and what was the outcome of the conflict?
8. What were the causes of the coal strike of 1922 and how was it settled?

9. What do you think is the present tendency of the government and of the public in labor disputes?

10. Is it true that the public pays the cost of strikes? If so, should this sacrifice on the part of the public be prevented, and how?

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CHAPTER XXVIII

INDUSTRIAL CO-OPERATION AND CONCILIATION

Relations between Employer and Employee.—Contemplation of the industrial strife described in the preceding chapter might lead to the hasty conclusion that the relationships between workers and employers were steadily growing worse. It is true that conditions of modern industry have led to an increasing tension, to more points of possible disagreement, and to greater difficulties in the way of personal contact between owners, or management, and employees. It also is true that, were we to judge either employers or labor by their most radical and least conciliatory representatives, the hope for industrial tranquillity and justice would indeed be remote.

The hopeful aspect of the picture, however, lies in the fact that to a large extent workers, employers, and the public in recent years have faced honestly the admitted difficulties of the labor problems in industry, and have set about to find solutions which will prevent strife and which will secure justice—or its approximation—to all parties.

With each important strike there has come with increased force the realization that these conflicts within industry are wasteful, that often they settle nothing, and that the public, which usually is not concerned in the quarrel, is made to suffer serious inconvenience and loss.

The methods of settling industrial disputes peacefully and with at least approximate justice have taken three main forms. Sometimes the controversy is referred to an individual or a committee outside the industry. The individual or the committee hears the arguments of each side, considers the facts presented, and renders a decision. This method is called

“arbitration.” At other times a controversy is submitted, either voluntarily or through legal requirement, to a public tribunal, such as a national or state board or court. The third method is by a conciliation between the parties concerned, as, for example, between an employer and his workmen without the intervention of an outside party.

Arbitration of Industrial Disputes.—Arbitration by a board outside the industry is well illustrated in the settlement of the anthracite strike of 1902, to which reference was made in the preceding chapter. In that controversy, the questions at issue between the workmen and the mineowners were referred to a commission appointed by the President of the United States, and the decision of the commission was accepted by both parties. Similar principles and methods have been followed in the settlement of many industrial disputes. In many cases, points at issue between an employer and his workmen have been submitted to arbitration without the calling of a strike, thus obtaining continuous operation of the industry and avoiding the waste, to employer, employees, and the public, involved in a stoppage of work.

Arbitration has been used successfully in both unionized industries and those in which organizations of workmen are not recognized. Possibly its most serious shortcoming is that employers or workmen are sometimes tempted to make demands or set up claims merely for the purpose of bargaining, depending upon a compromise decision under which they will receive, not what they asked for, but all that they expected to get.

Public Labor Tribunals.—Recent years have seen a growing tendency to create national or state boards and commissions, with greater or less power to regulate the relations between labor and capital. This tendency is justified in part by the obligation of society to enforce fair dealing among its

members, and in part by the increasing realization that the public is injured when employer and employees engage in strife, and that the rights of the public ought to be guarded by the government.

These tribunals have differed between themselves in various particulars. Some have represented only the public or the government; others have included representatives of labor and of business. Some have been given broad powers for the enforcement of their decrees; others have had little actual authority, and have depended for their effectiveness upon persuasion or upon the publicity incident to open hearings in which the case for and against each side is presented.

During the World War the War Labor Board was created to secure justice and prevent stoppages of work, particularly in the industries essential to the nation. This board heard many disputes and made awards which sometimes favored the workmen, sometimes the employers. After the war, Congress instituted the Railroad Labor Board, to hear and settle controversies between the railroad corporations and their workmen. This board, upon which railroad managements, railroad workmen, and the public were given representation, was authorized by law to hear disputes, to protect the interests of all parties, and, in particular, to pass upon applications of either men or management for changes of wages or working conditions. Its decisions, although not strictly enforceable, generally were accepted by all parties. An exception came in the summer of 1922, when the railroad shopmen went on strike against a decision of the Railroad Labor Board which involved a reduction of wages.

Many states have created industrial boards, with varying degrees of authority, to act upon disputes between employers and employees. Sometimes these boards are given full power to enforce their decrees. This is the fact with respect to the

Industrial Court of Kansas, created by a law of 1920. This law, which applies to industries connected with the manufacture of food products; clothing, and other wearing apparel; with the mining of coal, and with the transportation of the products of those industries, forbids strikes or lockouts. All disputes in the industries mentioned are to be taken before the Court of Industrial Relations, composed of three judges appointed by the governor of the state. The Industrial Court has authority to enforce its awards, but appeals may be taken to the regular state courts. The law authorizes the Industrial Court to take over and operate essential industries in which work has been stopped as the result of disputes between management and workers.

The Kansas Industrial Court law has been energetically opposed by most leaders of organized labor, as well as by some employers, on the ground that it constitutes an unwarranted interference with personal rights.

Of another group of laws, under which public tribunals have little if any authority to enforce their decisions, the statute of Colorado is an example. In that state an industrial commission is constituted to investigate controversies between employers and employees, and in certain industries neither a strike nor a lockout may legally be declared until after thirty days' notice, furnished to the industrial commission. The theory of this law—like that of an earlier Canadian statute of somewhat similar effect—is that most disputes in industry will settle themselves if neither side can take hasty action, and if public hearings bring out the strong and weak points in the cause of each contestant.

Of governmental regulation of labor relationships, it may be said generally that it is yet on trial. While the present trend undoubtedly is in the direction of an extension, rather than a diminution of these activities, it is extremely difficult to pre-

dict the forms, or even the guiding principles, which ultimately will be embodied in national and state legislation regarding industrial relationships.

Conciliation within Industry.—Perhaps the most noteworthy development of recent years in connection with attempts to adjust industrial disputes peacefully has been the devising of systems of direct co-operation between the parties concerned. Increasing numbers of employers and workmen are settling their own problems by conference and frank discussion. The resulting increase in good-will, in acquaintance, and in understanding of each other's difficulties and points of view has been one of the encouraging factors in modern industrial life.

This negotiation within industry has been carried on by widely varying methods, but in most cases there is some form of representation of employees, usually by fellow workmen whom they elect for the purpose. There are perhaps as many as 1,000 different plans of employee representation in operation in industries of the United States.

These representation systems, with their widely divergent methods and even principles, may roughly be divided into two general groups. One group comprises the representation plans of the "governmental" type, the origination of which is credited to John Leitch. In this system, the employees, or their elected representatives, are organized in what is termed a "house of representatives," the foreman and other officials form a "senate," and usually the executive officers of the employing company make up a "cabinet." Negotiations are conducted by methods closely imitating the functions of the United States government. Proposals from one side or the other are presented in the form of bills which have to pass both the senate and the house of representatives before they go to the cabinet for approval.

The second group comprises the systems generally known

as "committee" forms of employee representation, or works councils. Under this method, employees elect representatives who negotiate directly with the management, usually through committees and conferences, but without the imitation of governmental machinery. The works council type of representation generally is credited to John D. Rockefeller, Jr. Following a strike of coal miners at properties of the Colorado Fuel and Iron Company (a Rockefeller corporation) in 1913-1914, Mr. Rockefeller visited the properties of the company in 1915, accompanied by W. L. Mackenzie King, previously Minister of Labor in Canada and later Prime Minister of the Dominion, but who at the time was employed by the Rockefeller Foundation as an expert on labor subjects. At that time the "industrial representation plan" of the Colorado Fuel and Iron Company was adopted. This plan served as a model for many similar systems introduced in other large industries.

Co-operation and Unionism.—Plans of employee representation have been adopted both in unionized and in unorganized industries. Most of those which have attracted widest notice, however, have been connected with corporations which did not grant union recognition. On the other hand, there have been some instances of employee representation and union contracts operating side by side.

A somewhat unusual development of industrial conciliation has been in the clothing industry. In 1910 some of the workers employed in factories making men's clothing, and who previously had belonged to various trade unions or had been unorganized, formed the Amalgamated Clothing Workers of America, an industrial union. This organization gained strength rapidly, and within a short time it was able to make an agreement with the Chicago manufacturing firm of Hart, Schaffner and Marx, which became the model for similar agreements in Chicago and other cities. While these agree-

ments include full recognition of the union, they have many of the elements of employee representation. An unusual feature is the organization by "markets," or cities, with an "impartial chairman" in each city, to whom are referred such disputes as fail of settlement within the factories. This form of agreement, so far as it affected new York and some other eastern "markets," was disturbed by a strike in 1921, and was only partially restored.

Other Methods of Improving Industrial Relationships.—

In addition to machinery for settling disputes between employers and workmen, many other expedients have been adopted for improving the conditions of laborers and their families and for bettering the relationships within industry. Some of the improvements brought about through legislation have been described in an earlier chapter (see Chapter XXV, page 256).

From the beginnings of modern industry there have been employers who were interested in the living and working conditions of their employees and who gave their attention to improving conditions in and around their establishments. In time, these activities came to be known as "welfare work." This work has become prominent mainly in the twentieth century, although it was initiated by some employers at a much earlier period.¹ Welfare work, now usually called "employees' service" or "mutual service," includes provision for sanitation, safety, and medical care; for recreation and social activities; for club houses; and sometimes for schools and churches. Often it has been resented by the workers, who have considered it an interference with their personal liberties. Sometimes, also, employers have been accused of expending in employees' service activities, money which the workers should

¹ For example, by Robert Owen, whose activities in behalf of English workmen began about 1800.

have received in the form of higher wages. With better understandings between employers and workmen, and with wiser judgment in planning and carrying on welfare activities, much of the prejudice against this form of service has disappeared.

Employers sometimes purchase "group insurance" for their workmen, by which each employee's life is insured for a definite sum. Sometimes the cost is borne wholly by the employer; sometimes the workmen themselves pay a part of the expense. Group insurance is sometimes provided as a means of encouraging workmen to remain permanently in the service of their employer. It serves also as a method of teaching the laboring man the value of life insurance and other provision for the maintenance of his family in the event of his death.

Profit-Sharing and Stock Ownership.—Many companies, particularly in times of prosperity and high earnings, have introduced systems of profit-sharing, under which a portion of the gains of the business are distributed among the workmen. Under these systems it is usual first to pay all the expenses of operating the industry, including wages, interest, and taxes, then to pay a fixed dividend to stockholders, after which what is left of the receipts is divided equally between the stockholders and the wage-earners. Profit-sharing generally is considered a means of increasing the efficiency of labor by making its earnings dependent in part upon the success of the business. At times it has operated with entire satisfaction. At other times it has been abandoned, often as the result of apparent lack of appreciation by the workmen benefited through it. The shortcomings of profit-sharing lie principally in the fact that the employees, who naturally cannot be required or expected to share the losses which come in times of adversity, come to look upon their shares of the

profits as additions to their wages, and resent the discontinuance of dividends when business is poor. Sometimes, also, there is a disposition on the part of the workers to dispute the figures furnished by the management, and to suspect that some portion of their share of earnings is being withheld.

Another method of giving the wage-earners a personal concern in the prosperity of the employer's business is through ownership of stock. Some corporations distribute stock free to their employees, as a sort of bonus. Others assist them in purchasing it, usually on deferred payments, and sometimes at less than the market price. This system has many advantages in principle, and often has operated successfully. Its main disadvantage lies in the fact that stock prices fluctuate widely, and that sometimes workmen, after holding their stock for months or years, find that it is worth less than they paid for it.

TOPICS FOR REVIEW AND DISCUSSION

1. What is arbitration? Give some examples of its use in industrial disputes.
2. What are some of the plans which have been adopted for settlement of industrial controversies by public tribunals?
3. What is employee representation? What are the principal forms in which it has been developed?
4. What are some of the activities included in what is called "welfare work"?
5. What is profit-sharing? Group insurance? Stock ownership by employees?
6. What are some of the advantages and some of the disadvantages of profit-sharing?
7. Do you consider arbitration by an outside body preferable to co-operation between the parties interested? Why, or why not?
8. Should a public tribunal be given power to enforce its awards in labor disputes?
9. What are the advantages of enforcing delay of a strike or lockout pending an investigation? Are there any disadvantages?

10. Secure the employee representation plan of one of the large industrial corporations; study it and report on its main provisions.

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CHAPTER XXIX

"BIG BUSINESS," THE CORPORATION, AND THE CONCENTRATION OF CAPITAL

Attributes of "Big Business."—In our study of transportation, of manufactures, and of commerce, we have caught occasional glimpses of a system which in increasing measure has come to be the driving power behind American industry. This system is what is known as "big business." In the first quarter of the twentieth century it has grown to a magnitude and a power which make it a phenomenon unlike anything in the previous history of the world.

For "big business" many definitions have been given. Some of them have been laudatory and some unfit for repetition in polite society; some have been inaccurate and some incomplete. For the purposes of economic history, big business may be described as the concentration of large sums of capital, enormous resources of labor and materials, and the highest degree of managerial ability in support of industrial and commercial enterprise. It is not identical with enlarged manufacturing units, for its functions are applied as often to trade or commerce as to manufactures. It is not equivalent to financial power, although it is closely allied to it, and financial power is in fact an important element in its composition. It has no necessary relation to monopoly or special privilege, for some of the most outstanding examples of big business have been developed under conditions of free competition. The essence of big business is not to be found in the corporate form of organization, although the corporation, as we shall see, has been one of its most useful instruments.

The Human Element in Big Business.—Conceptions of big business often are concerned too much with capital. Capital, it is true, is essential in the construction of large-scale industry. But capital, of itself, is simply invested wealth, and is helpless to do more than draw the interest which economic conditions establish. Many capitalists—even some of those of the more or less conventional multi-millionaire type—are not leaders of business at all.

On the other hand, many of the business men who have won fame as “captains of industry” have not been primarily capitalists. And here we begin to arrive at the very heart of the big business structure. Its essential element is not capital or resources or labor or monopoly, but men. That supreme quality of leadership which in past ages was devoted to war, to politics, and to religion, in America in the twentieth century has largely gone over into the field of industry. Thus has come big business.

This quality of business leadership is something aside from the conventionally recognized elements in industry. It is not labor; recent events in Europe have shown the helplessness of labor without skilled direction. It is not capital; capital can be hired at the market price—perhaps 4 or 5 per cent—and many of its owners prefer thus to put it out to service rather than to use it in the building of business enterprises. It is not even management; management may be employed in the open market, and its yearly wage, except in occasional outstanding instances, is measured in no more than tens of thousands.

The builder of big business is a man who combines the qualities of judgment, imagination, daring, initiative, and will-to-succeed, in just that proportion which enables him to mobilize under his direction capital, labor, and managerial skill and lead them to the victorious achievement of a single purpose—his own. In a certain magnified sense, he is what the economists call the “entrepreneur.” His capacities are dis-

tinctly different from those of the operating executive. The differences between a Harriman and a skilful railroad manager are the differences between a Napoleon and a Marshal Ney.

In our study of present-day industry—with its dominant big business motives and driving power—we should keep this human element steadily in mind. Otherwise we shall miss much of the philosophy behind the whole development.

Methods of Business Organization.—A man who wishes to start a business enterprise may choose from among several methods of organization. He may proceed as an individual, advance his own money as capital, and borrow more, if he needs it, on his personal credit. He thus becomes the sole owner of the business, is entitled to all the profits, and is responsible for the debts. If the enterprise fails, all his resources—with the exception of any that may be exempt by law—are taken, if necessary, to pay the creditors. This simplest of all business organizations is called “individual ownership.”

Similar in essential principles to individual ownership is the arrangement known as a “partnership.” Under this system, two or more men join in the ownership of a business, divide the profits among themselves, and each is fully liable for the debts.

Somewhat different principles are involved when an enterprise is organized in the form of a “corporation.” Here the company, chartered by law and empowered to engage in specified activities, takes the place of the individual owner or of the members of a partnership. The people who furnish the capital receive stock in proportion to the amount they advance. If money is borrowed, it is done on the credit of the corporation, not of individuals, and the corporate property—as, for example, the mine or the factory owned by the corporation—usually is pledged as security. If the enterprise goes into bankruptcy, the liability of the individual owners usually is limited to the

amount of stock which each holds; that is, a stockholder in a bankrupt corporation may find that his stock has become worthless and his investment is lost, but ordinarily he is not required to sacrifice his other possessions to pay the debts of the company. Control of the business is exercised by the stockholders in proportion to the amount of their stock. The stockholders elect directors, and these, in turn, choose the officers who are in active charge of operations.

As a method of organization, the corporation is not recent—not even modern. Says an eminent economist:¹

Although according to the recent researches of Deloume and Weber the commercial corporation probably existed in the later centuries of the Roman republic, in its modern shape it dates from the early medieval Italian cities. The earliest form was that of a so-called "bank," individuals associating their capital to form a joint stock, loaning it to the government on a pledge of certain revenues, and participating in the profits according to their holdings. . . . The next important development of the joint-stock principle was in the trading companies of the Sixteenth century, which were at first mere temporary associations for the purposes of a single voyage, but which gradually assumed a more permanent form. It was not, however, until the predominance of industrial over commercial capital in the Nineteenth century that we find the immense expansion of corporate enterprise which marks modern life.

The Corporation in Modern Industry.—In present-day industry, the corporate form of organization has been adopted for practically all large enterprises and for many small ones. It has been one of the most potent factors in the growth of the immense industries—manufacturing, transportation, commercial, and financial—which we generally call big business. It is not too much to say that without the corporation, modern business could not have developed in its present form, and that

¹ Principles of Economics, by Edwin R. A. Seligman, p. 97.

its growth, under whatever system of organization, would have been stunted and hesitant.

The advantages of the corporate organization are many. One of the most important lies in the fact that it permits the assembling of vast sums of capital, furnished by large numbers of people, some of them persons of small means. Thus the comparatively small resources of many people are concentrated and applied to industry in a way which would be impossible were the individual owners acting separately. Through the feature of limited liability—that is, the custom of making stockholders responsible only to the extent of their holdings—it is possible to induce large numbers of persons to make investments in enterprises which they would be unwilling to back with their entire fortunes. In this way, many pioneer and experimental enterprises have been financed, the stockholders well understanding that they were risking their investments, but being willing to take the risk in return for the chance of high returns. The results of this element of corporate organization have not been exclusively of the beneficial sort. Some enterprises have been able to secure capital when as a matter of fact the public and the business community would have been better off if they had died at birth.

Another advantage of the corporate form of organization lies in its permanence. It does not die with any human life. If the corporation be indeed “soulless,” it is also, within earthly limitations, immortal. Thus an enterprise under corporate management may continue its work for generations—theoretically, for centuries.

Partly for the reasons above stated, it has been possible under the corporate form of organization to create business units of greater size than by any other method. The United States has today at least one corporation with a capitalization of more than \$1,000,000,000, representing the investments of many thousands of stockholders. By thus building up huge

industries, business has been able to take advantage of the many benefits of large-scale production. Generally a large company can manufacture products, or conduct any other form of business, more economically than can a small one. It can buy raw materials in larger quantities and therefore at lower prices, can buy and use more labor-saving machinery and can afford to hire more expert managers. It can buy the patents granted to inventors, and thus avail itself of the newest and most ingenious processes. All these elements enter into the lower cost of production.

Besides, a large company, made possible through the corporate form of organization, has important advantages in the matter of sales and distribution. If it operates plants or has distributing centers in different parts of the country, it can sell to each purchaser the product of the plant from which the cost of shipment will be least. For example, a steel company making railroad rails at Chicago and at Pittsburgh can manufacture rails for eastern roads at Pittsburgh and for western roads at Chicago, thus having an advantage over a competitor who has only one rail mill.

These advantages in the cost of doing business and of reaching markets work to the benefit of the stockholders of the large corporation. They may, and often do, benefit the public through lower prices or better quality or service.

Disadvantages of Corporate System and of Large Enterprises.—To offset these advantages of the corporate form of organization and of the increasing size of business units which it has helped to bring about (for the purposes of this discussion we are considering them together) there are certain manifest disadvantages. When combinations of capital steadily grow larger, there is always the possibility that one concern will gain a monopoly of an entire industry. Such a company could, if unrestrained, charge prices limited only by the ability

and willingness of the consumer to pay. This danger of monopoly and consequent price raising has been much in the minds of legislators and of students of modern business.²

The large corporation, with its huge aggregation of capital and its powerful productive and distributing capacity, has, as we have seen, important advantages in a competitive market. It can produce more cheaply and sell at lower prices, other things being equal, than can its smaller rival. This fact is responsible for another possible danger in the development of large organizations. There is constantly present the temptation for the big concern to take advantage of its dominant position and put its rivals out of business altogether. This it sometimes has power to do through what is called "unfair competition." If the owner of a small grocery store is able to sell more cheaply than his rival on the other side of the street, the latter may suffer loss, or may even be forced to quit the field, but the public generally considers that no wrong has been done. However, if a huge corporation, with a nationwide market, deliberately undersells competitors in certain cities until it forces them out of business, in the meantime making up for its losses by charging high prices in places where it has no competition, the situation is different. In the same way, the small business man generally tries to transport his products as economically as he can; this, however, is quite different from the situation which comes about if a monster corporation, by threats of withdrawing its patronage, secures lower freight rates than are allowed to other concerns in the same line of business.³

² In this connection it must be remembered that in some industries monopoly has come to be looked upon as desirable, or at least as inevitable. To this class of enterprises many types of public service belong. In most cities, the municipal transportation system, the gas and electricity supply, and the telephone, are monopolies, either legally or practically. Under such circumstances the public seeks the protection of its interests through regulation rather than through competition.

³ There has been much dispute as to the extent to which some large corporations, past and present, have resorted to unfair practices. Increasing legal restrictions and rising standards of business morality doubtless have done away with, or greatly modified, many methods which were used in the past by both "big" and "little" industries. Some of the prosecutions of business combinations will be examined in a later chapter.

Another disadvantage growing out of the concentration of business under the control of large corporations lies in the opportunity for reckless or fraudulent finance. As a result of this, investors have suffered unnecessary losses, while, in other instances, consumers have been forced to pay unreasonable prices in order to permit the payment of dividends upon swollen capitalization.

Of the disadvantages of the corporate form of organization a recent writer says⁴:

But corporations are not without their drawbacks. Since they are creatures of the state, they are more peculiarly liable to suffer from exactions of fees, dues and taxes than the independent forms of business. Furthermore, they are often called upon to furnish expensive reports to state authorities, to say nothing of the statements which they must submit to their own stockholders. The meetings of stockholders or boards of directors often prove to be costly obligations of a corporation. The men in charge of operating a corporation work for a salary, and hence may not have the personal enthusiasm of a man who toils for a profit all accruing to himself. . . . These shortcomings of the corporation, however, are so far outweighed by its advantages that the corporate form is the almost universal organization among the prominent businesses of the United States.

In recent years the American public generally has come to believe that the advantages of the corporation and of big business more than make up for the disadvantages and dangers. The efforts to protect the interests of the consumer and of the community, therefore, have generally taken the form of regulating large corporations rather than of trying to destroy them simply because of their size and power.

⁴ Industrial Organization, by Malcolm Keir, p. 385.

The Development of Large Industrial Units.—In our study of manufacturing and of labor, we have had occasion to observe one phase of the development of big business—the increasing size of manufacturing plants, the separation of owner from laborer and sometimes even from manager, and the divorce of the worker from the tools of his trade. It should here be called to mind that the same tendency to increase the magnitude of the enterprise, and to combine many small concerns under one management, has prevailed not only in manufacturing but in all branches of business. The tendency has been aided, although not wholly caused, by the adoption of the corporate form of organization, the general principles of which we have just observed.

Corporations for private business purposes were occasionally chartered in the early years of the nation's history. At first, a separate law was required for the granting of each charter. In 1837 Connecticut enacted a statute by which a charter should be issued automatically to any concern which made application and which complied with specified requirements. This, in principle, has since become the method in general use. New York, in 1846, put into its constitution a provision similar to the Connecticut law.

The real growth of the corporate form of organization dates from about the period of the Civil War. The expansion of industries during and after the war brought demands for more capital than usually was in the possession of an individual or a partnership, while at the same time the risks attendant upon many of the new enterprises—for example, the construction of railroads in the west—made the limited liability provision attractive to investors.

The increase in the size of industrial concerns was fostered by many changed conditions. The rapid settlement of the west and the increase of population provided markets extensive beyond the dreams of the business man of an earlier generation.

At the same time, the spread of transportation facilities, with the consequent ease and cheapness of sending freight to distant points, enabled the large producer or dealer to make his patronage nation-wide. This gave the wealthy corporation, located at a favorable point, practically limitless opportunity for growth. Sending its products to the farthest corners of the continent, or even across the ocean, it was able to pile up the advantages of large-scale production and distribution, and undersell the small local dealer, even at his own doorstep. Thus there grew up, in the years between the Civil War and the panic of 1873, a large number of independent, competing companies in various lines of business, all larger and richer than had been known in earlier periods.

The Combination of Business Units.—Between these companies, each fighting for as large a share as possible of the available business, there grew up a competition keen, pitiless, and sometimes unscrupulous. All the methods of rivalry, fair and unfair, were resorted to. We already have had occasion to note the relatively low standards of business morality in the two or three decades following the Civil War. (See Chapter XIX, page 197, and other chapters.) These low standards were carried over into the new institution of big business with results that often were disastrous to the business men themselves, and more often still were against the interests of the consumers and the public.

As the destructive effects of this unrestrained competition became manifest, various efforts were made to limit it, usually by combinations of independent companies or by agreements between rivals. The first of these efforts took the form of "pools," or agreements for the distribution of business or profits and for the fixing of prices. In our study of the development of railroads (see Chapter XXI, page 217) we observed how such pools operated in the field of transportation.

Somewhat similar agreements were made between competing manufacturers or distributors. Two or more rivals would get together, set prices below which each agreed not to sell, and sometimes assign fixed territories in which each was to have the market to himself. The weak point in this system, from the standpoint of the pool makers, was the fact that often none of the parties to the agreement dared to trust any of the others. Solemn pledges were broken, prices were cut, and competition became more "cut-throat" than ever. While the system of pooling did not disappear, and while, in fact, it survives in some forms to the present time, it was found inadequate for what big business looked upon as its needs. A more effective method was not long in being discovered.

The Rise of the Legal Trust.—In 1865 John D. Rockefeller, a Cleveland refiner of petroleum, with a few associates organized the Standard Oil Company, with a capital stock of \$100,000. The company grew, absorbed rivals, and in course of time became the dominant interest in the rapidly expanding oil industry. In 1882 the various corporations belonging to the Rockefeller group were reorganized as the Standard Oil Trust. All the stock was surrendered to a board of nine trustees (hence the name "Trust") and the stockholders received, in exchange, certificates issued by the trustees. These certificates represented ownership in the constituent companies. Management was wholly in control of the trustees.

Attracted by the success of the Rockefeller interests under the trust form of organization, other industries adopted the same expedient, and "trusts," in the legal sense, became common. In 1890, however, the Sherman anti-trust law was enacted, and in the next few years the trust, as a legal form of business organization, disappeared. The term "trust," however, has been retained in common speech to designate any combination suspected of attempting to secure a monopoly.

Search for New Methods of Combination of Industries.—

Deprived of the trust form of organization, industries, more than ever converted to the idea that consolidation meant increased profits, sought for a method sanctioned by law. Some experimented with the device known as the "holding company," which is a separate corporation chartered for the purpose of holding the stocks of various companies which wish to combine their interests. The Standard Oil Company operated in this manner from 1899 to 1911, the Standard Oil Company of New Jersey being the corporation selected to take over the stock of the constituent units. In the latter year, by a decision of the Supreme Court of the United States, the Standard Oil Company as then organized was held to be a combination in violation of the Sherman Anti-Trust Law, and was ordered dissolved, the stock being redistributed among the various members of the combination.

As a result of the dissolution of the Standard Oil Company and of some other combinations, and of the generally doubtful legal status of the holding company form of organization, especially since the enactment of the Clayton Law in 1914, the tendency in recent years has been toward the creation of still closer combinations, through actually merging several corporations into one. Under whatever form, the consolidation of units and the growth of constantly larger corporations has gone ahead steadily, and there appears to be no indication that there will be a reversal of this policy.

TOPICS FOR REVIEW AND DISCUSSION

1. What are some of the points of difference between a partnership and a corporation?
2. What are some of the advantages and some of the disadvantages of the corporation form of organization and of large-scale industry?
3. What were some of the causes for the increasing size of industries after the Civil War?

4. What is a pool, and how did business pools originate?
5. What is a trust, in the legal sense? Why did these organizations disappear?
6. What is a holding company?
7. Is a monopoly harmful to the public? If so, when and why?
8. What do you understand by unfair competition? Can you give any instances of its use?

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CHAPTER XXX

THE UNITED STATES STEEL CORPORATION

A Typical Industrial Unit.—In the preceding chapter we traced the general development of large industry, particularly as it was influenced by the corporate form of organization and by the consolidation of competing companies. The tendencies there observed may be better understood by studying in more detail the development of a typical large business organization of the present day. None is better adapted for this study than the United States Steel Corporation, the largest manufacturing company in the country. Not only in size, but in form of organization and in business and operating methods it may be looked upon as the most perfect example of twentieth century big business.

The Reign of Competition in the Steel Business.—We have already learned the main facts connected with the development of steel production. (See Chapter XXIII, page 235.) Fostered by the rapid growth of this industry, many powerful companies were built up, and in the closing years of the nineteenth century these companies were fighting desperately for the available steel business. Now it happens that the steel industry is extremely sensitive to every change in the general business situation. In times of prosperity the demand for steel is keen, purchasers throng the market clamoring for supplies, and the mills race day and night to turn out the needed tonnage. When adversity grips the business world, railroad building pauses, construction is halted, and factories shut down or diminish their output. This greatly cuts down the demand for steel. The available business is not sufficient to take up

the capacity of the plants, and the least fortunately situated mills are forced to shut down, while others work only part time. As a result, workers are thrown out of employment by thousands, and the owners of the steel plants suffer serious losses from idleness of capital and equipment. The steel industry often is termed the "barometer of business conditions."

The fluctuating demand, with its alternate periods of prosperity and depression, served to make competition among steel producers more keen and more demoralizing. When buyers were bidding against each other for the available output of steel, prices were advanced and the capacities of the mills were increased. When the demand fell off, producers cut prices in their efforts to secure what they could of the business yet to be had, and sometimes sold for less than the cost of production, in order to avoid shutting down their mills altogether.¹

Andrew Carnegie, Monarch of the Steel Kingdom.—Out of this battle royal of newly grown industrial giants there emerged one figure which overtopped them all. This was Andrew Carnegie. Born in Scotland in 1835, Carnegie had come to the United States in 1848. He worked for a short time in a cotton factory in Pennsylvania; then, at the mature age of fourteen he became a telegraph messenger; and later he became a telegraph operator and railroad official. His keen business instinct led him to branch out into various enterprises, and finally, soon after the Civil War, he jumped aboard the iron industry just as it was gathering momentum for its later rapid development. In the iron business and later in the steel business, Carnegie manifested those qualities of leadership which are the inheritance of the born captain of industry.

¹ It should not be understood that the conditions here described have wholly disappeared. From its very nature, the steel industry is a business of fluctuating markets and irregular demand. In the depression of 1920-1922 much steel was sold for less than it cost the manufacturers. In spite of the towering proportions of the United States Steel Corporation, the steel industry is still largely competitive.

Particularly did he possess an almost uncanny faculty for picking and training executives—so much so, that even in our day many of the commanding figures in the steel industry look back to him as their master. Before the end of the nineteenth century Carnegie was acknowledged leader of the steel world.

But Carnegie had reached advanced years, he was wealthy, and it was known that he wished to retire from active business. And there was no lack of hands ready to take over his scepter.

The Beginning of Combination.—To escape the destructive effects of unrestrained competition, manufacturers already had turned their attention to various forms of combination. The system of pooling (Chapter XXIX, page 299) had been resorted to, but in the steel business as in others, rival producers could not trust each other, and the agreements were broken, sometimes as soon as they were made.

Then was conceived the idea of combining companies, a plan which had been adopted with success in other industries, notably in that of oil refining. In 1898 there was formed a consolidation known as the Federal Steel Company, made up of the Illinois Steel Company, the Minnesota Steamship Company, the Lorain Steel Company, the Joliet and Eastern Railway Company, and some other units. It had a capital of \$100,000,000 and controlled several steel plants, ore mines, railroads and lake boats. Its president was Elbert H. Gary, a lawyer who had become interested in the steel business and had attracted wide attention by his ability as an executive and an organizer.

The Federal Steel Company was the second largest corporation in the field of iron and steel. First place was held by the Carnegie Steel Company, which was formed in 1900 through a merger of the interests of Andrew Carnegie with those of H. C. Frick. This company had a capital stock of

\$160,000,000 and an equal amount in bonds. Its steel making operations were concentrated in and near Pittsburgh. Carnegie was the moving spirit in this corporation, while the president of the company was Charles M. Schwab, then a young man, who had risen swiftly to the position of Carnegie's chief lieutenant.

The Birth of the Steel Corporation.—There were men in the steel industry who thought they saw advantages in a still larger combination. Chief among these men was Elbert H. Gary, president of the Federal Steel Company. Gary believed that a merger of the Federal and the Carnegie interests was possible and that the mammoth combine thus formed could be operated successfully. Gary's ambitious project was helped by Carnegie's desire to sell his interests and retire from active business. The essential parts of the proposed merger were therefore ready.

What was yet needed was money. To effect the consolidation and provide for the rebuilding of plants for the expenses during the early period of operation, more cash was needed than was within reach of the steel men. Gary, Carnegie, and Schwab therefore turned to J. Pierpont Morgan, the dominant power in the banking business of the country, and Morgan, after some hesitation, was persuaded to undertake the financing of the consolidation.

The United States Steel Corporation, formed as a merger of the Federal Steel Company, the Carnegie Steel Company, and some other units, was chartered early in 1901. Its authorized capital was \$1,100,000,000 in stock and \$304,000,000 in bonds. The authorized stock was divided equally between common and preferred. Of this capitalization, the financial syndicate headed by Morgan received 648,987 shares of preferred and 648,988 shares of common stock, in payment for

\$25,000,000 in cash, some other advances, and for its services in completing the consolidation. Most of the remaining stock and bonds went to the constituent companies in payment for their properties, their capital, and their good-will.

The capitalization of the United States Steel Corporation was far in excess of the value of the properties acquired by the merger. The excess, which some economists estimate as having been equal to the whole of the common stock, was what is termed "water"; that is, stock which is issued without corresponding investment of money or other things of tangible value. This "watering" of the stock of the corporation has been much criticized. It was due, however, to the fact that the stock was issued mainly to pay for the companies taken into the merger, and that the owners of those companies had to be given prices large enough to persuade them to sell. Now, some of the constituent companies were earning large dividends upon their own capitalization, and their owners, in selling to the Corporation, insisted upon being paid on the basis of those earnings, rather than upon the amount of their original investments. As a result, the stocks of some of the companies were purchased for more than equal amounts of the stock of the United States Steel Corporation. The stocks thus purchased at high figures probably did not themselves in every case represent solely invested capital; that is, the Corporation probably bought some "water" with the stock it purchased. We may anticipate our narrative long enough to add that during the period of the World War, when the profits of the United States Steel Corporation were large, high sums from earnings were put into extensions and improvements of properties, and thus, it is claimed, the value of the physical assets was brought up to a sum fully as great as the capitalization—in other words, the "water" was removed from the stock.

Method of Forming the Consolidation.—Let us now look in greater detail at the method by which the giant merger was formed.

The largest of the constituent units was the Carnegie Steel Company, with a capital of \$160,000,000 in stock and \$160,000,000 in bonds. For this the Corporation exchanged its new issues on the following basis: Carnegie bonds were acquired to a total amount of \$159,450,000, in exchange for an equal amount in bonds of the United States Steel Corporation. Carnegie stock to the amount of \$96,000,000 was paid for with \$144,000,000 of Corporation bonds. The remaining \$64,000,000 of Carnegie stock was exchanged for \$98,277,120 in preferred stock and \$90,279,040 in common stock of the United States Steel Corporation.

Stockholders of the Federal Steel Company exchanged their securities for those of the new Corporation according to the following ratio: For each \$100 of Federal preferred stock was given \$110 in preferred stock of the Corporation, while for each \$100 of Federal common stock the purchase price was \$107.50 of Corporation common and \$4 of Corporation preferred.

Stock of the American Bridge Company was exchanged, each \$100 of preferred stock being purchased for \$110 of Corporation preferred and each \$100 of common for \$105 of Corporation common.

Preferred stock of the American Tin Plate Company brought \$125 of Corporation preferred for each \$100, while common stock of the same company was exchanged on the basis of \$120 in Corporation preferred and \$125 in Corporation common for each \$100.

Preferred stock of the National Steel Company was exchanged on a basis of \$125 of Corporation preferred for each \$100, and common stock was exchanged on a basis of \$125 of Corporation common for each \$100.

Preferred and common stock of the American Steel Hoop Company were exchanged for equivalent amounts of the same classes of Corporation stock.

The same basis was used in acquiring the stock of the American Sheet Steel Company.

Preferred stock of the National Tube Company was exchanged on a basis of \$125 of Corporation preferred for each \$100, while the holders of common stock received \$8.80 in Corporation preferred and \$125 in Corporation common for each \$100.

The Lake Superior Iron Mines had only one class of stock, and this brought \$135 of Corporation preferred and \$135 of Corporation common for each \$100.

Preferred stock of the American Steel and Wire Company was exchanged on a basis of \$117.50 of Corporation preferred for each \$100, and common stock brought \$102.50 of Corporation common for each \$100.

Expansion, Investigation and Litigation.—With the properties listed above as its nucleus, the United States Steel Corporation grew by increasing the size of its original units and by acquiring additional mines, steel plants, and railroads. Its output increased—in late years it has controlled more than 50 per cent of the steel manufacture of the United States—and its earnings were such as to cause a rapid gain in the quoted value of its stocks. Its most noted purchase, and one which was made the basis for much criticism, was that of the Tennessee Coal, Iron and Railroad Company, effected in 1907.

The unprecedented size of the United States Steel Corporation, the “watering” of its stock, and the suspicion that it had been created to acquire a monopoly of the steel production of the country, subjected it to severe criticism and to numerous investigations, governmental and otherwise. In 1911 George W. Wickersham, Attorney-General in the ad-

ministration of President Taft, filed a suit for dissolution of the Corporation, charging violation of the federal anti-trust laws. In the United States district court at Trenton, New Jersey, the case came to trial, and evidence was produced in an effort to show that the company was a "combination in restraint of trade." The court, in 1915, handed down a decision acquitting the Corporation. The case was taken to the Supreme Court of the United States, which in 1920 sustained the lower court and dismissed the suit.

TOPICS FOR REVIEW AND DISCUSSION

1. What were some of the causes of the rapid growth of the iron and steel industry? (See also Chapter XXIII.)
2. What were some of the effects of unrestrained competition among steel producers?
3. Who were the leading promoters of the United States Steel Corporation? Why did they try to interest J. Pierpont Morgan in the consolidation plan?
4. What is meant by "watered" stock? What was the cause of the large amount of "water" in the stock of the United States Steel Corporation?
5. Why did the owners of some of the companies brought into the merger demand, and receive, more in Corporation securities than the par value on their stock?
6. What is meant by saying that the Corporation has "unwatered" its stock?
7. What was the federal dissolution suit, and what was the outcome?
8. Was it justifiable to issue United States Steel stock far in excess of the value of the physical properties acquired?
9. Study in an encyclopedia or other reference work the life of Elbert H. Gary; report on his business career and his contribution to the growth of the American steel industry.

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CHAPTER XXXI

ANTI-TRUST LEGISLATION AND PROSECUTION

Opposition to Combinations.—The combinations of capital and the expansion of business which we have been studying in the two preceding chapters were not effected without opposition. American resentment of monopoly or of anything suspected of a tendency in that direction is intense and almost instinctive. As early as 1776 the state of Maryland, in adopting her constitution, declared that “monopolies are odious, contrary to the spirit of free government and the principles of commerce, and ought not to be suffered.” Other early constitutions expressed the same belief. In our study of the first and second Banks of the United States (see Chapters VIII and IX) we observed the readiness with which the charge of monopoly aroused public opposition to the centralized banking power of the country. For many years after the downfall of the second United States bank this anti-monopoly sentiment lacked a conspicuous target. Business enterprises in the main were small, and gave no occasion for suspicion that they might attain a size and power that would menace public welfare.

The first development of “big business” in the modern sense of the term was in connection with transportation. As we have seen (see Chapter XXII, page 222), the combinations of railroads and their supposed disregard of the rights of the public led to insistent demands for regulation, which resulted in the enactment of the Interstate Commerce Law and many other statutes, both federal and state.

Growing Opposition to Industrial Combinations.—With rapid increase in the size of business and manufacturing cor-

porations, in the decades following the Civil War, hostility to concerns suspected of seeking to monopolize trade grew up rapidly. Large corporations were accused of using unfair methods to eliminate rivals, of corrupting legislatures and courts, and of extorting ruinous prices from consumers. Some of these charges were all too well founded; others were the outgrowth of the prevalent suspicion of large corporations, and were directed against size rather than unsocial practices.

Especially after the organization of the Standard Oil Trust (see Chapter XXIX, page 300) this public clamor became more and more insistent. The name "trust," at first used officially and legally as the designation of a specific form of organization, became a popular term of condemnation for all forms of business suspected of monopolistic tendencies. In the eyes of the eastern laborer and of the western farmer and small merchant, "the trusts" became the symbol for all that was oppressive and unmoral in the larger business system.

In accordance with this popular opposition to large corporations, many states enacted anti-trust laws, designed, by one method or another, to prevent the formation or operation of monopolies. The first of these general anti-trust laws was that of Kansas, passed in 1889. Within a year or two after 1890, sixteen or more states had laws that may be classed as anti-trust in purpose. These laws have been extended and strengthened from year to year.

State regulation, however, proved largely ineffective. Most of the larger corporations were engaged in interstate commerce, the regulation of which is vested in the national Congress. Moreover, some of the states not only failed to enlist in the anti-trust campaign, but even framed their laws in such a way as to give special encouragement to large business enterprises to incorporate within their jurisdiction. As the corporations thus formed could not be deprived of their charters by other states—although they might under some circum-

stances be deprived of the privilege of doing business in those states—the “trust-busting” commonwealths were stripped of much of their authority. The demand, therefore, was for government regulation.

The Sherman Anti-Trust Law.—In the presidential campaign of 1888, the platforms of both the Republican and the Democratic parties included planks favoring federal regulation of monopolies. President Harrison, in his first message in 1889, called upon Congress for

. . . . a consideration of the question how far the restraint of those combinations of capital commonly called “trusts” is a matter of federal jurisdiction. When organized, as they often are, to crush out all healthy competition and to monopolize the production or sale of one article of commerce and general necessity, they are dangerous conspiracies against the public good and should be made the subject of prohibitory and even penal legislation.

Thus exhorted by public opinion, by party platforms, and by the President, Congress was not long in enacting an anti-trust statute. The Sherman Law (so called after Senator John Sherman, although the completed statute was greatly changed from his original bill) was passed July 2, 1890. It provided that :

Every contract, combination in form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several states, or with foreign nations, is hereby declared to be illegal. Every person who shall make any such contract or engage in any such combination or conspiracy, shall be deemed guilty of a misdemeanor Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several states, or with foreign nations, shall be deemed guilty of a misdemeanor.

The law thus struck at monopoly and combination, the two features of "trust" organization and methods which had aroused the most widespread hostility.

Early Prosecutions under the Sherman Law.—With the Sherman Law as a weapon, the government was not long in assailing the large business organizations which appeared to fall within its jurisdiction. The first case to attract wide attention was that in which the government attacked the purchase by the American Sugar Refining Company of control of four previously independent refineries in Philadelphia. (*United States v. E. C. Knight, et al.*) It was shown that after acquiring the Philadelphia plants, the American Sugar Refining Company manufactured 98 per cent of all the sugar refined in the United States. The court held, however, that the monopoly thus established was in manufacturing, and that it had not been shown that there was any restraint or monopoly of "trade or commerce." The government was therefore defeated. The final decision in this suit was handed down early in 1895.

While the American Sugar Refining Company case still was in the courts, prosecution had been commenced by the government against the Trans-Missouri Freight Association. This was a case of wholly different nature, in which it was shown that certain railroads had combined to fix rates. This case was won by the government. It is important principally because, first, it established that the railroads were amenable to the Sherman Act (this had been disputed), and second, the Supreme Court of the United States held that the law applied to all combinations in restraint of trade, and not, as the defendants had contended, merely to restraint which was "unreasonable." •

Perhaps the most noted of the earlier prosecutions under the Sherman Law was that of the Northern Securities

Company. This corporation had been formed in 1901 as a holding company to take over the stock of the Great Northern and Northern Pacific railways, which already were joint owners of the Chicago, Burlington and Quincy. The effect of this merger was practically to unite all the important railroads of the northwest under one control. The government attacked the Northern Securities Company as a combination contrary to the provisions of the Sherman Law. By a close division (five justices against four) the Supreme Court in March, 1904, held that the anti-trust statute applied to combinations of railroads, and the merger was ordered dissolved.

The Standard Oil Dissolution.—We have noted (see Chapter XXIX, page 300) that the Standard Oil Trust was formed in 1882 to take over the stock and properties of a number of oil interests dominated by John D. Rockefeller. This trust was attacked in the state of Ohio, and in 1892 the Supreme Court of that state declared it illegal and ordered it dissolved. Some contention arose as to the good faith of the corporation in obeying this decree, but in 1899 a reorganization was effected. The trust, as a legal form, disappeared (if it had not previously done so, in compliance with the Ohio decree) and the charter of the Standard Oil Company of New Jersey was so amended that it could serve as a holding company to control all the Rockefeller oil corporations. The stock of the various corporations was exchanged for that of the New Jersey Company.

The Standard Oil Company, as thus organized, was attacked under the Sherman Law in the United States Circuit Court of Missouri. Monopoly, restraint of trade, and various unfair practices were alleged by the government. This case finally was decided by the Supreme Court of the United States in May, 1911. The Standard Oil Company was held to be an

illegal consolidation, and the holding company was ordered dissolved, the stockholders to be given shares in the various corporations which previously had been combined. By this "unscrambling" the huge oil corporation was separated into 38 companies.

An important feature of the decision in the Standard Oil case was that the court found that the "standard of reason" should be applied in determining whether any particular combination was a restraint of trade within the meaning of the statute. This was held to be contrary to the decision in the Trans-Missouri Freight Association case. It is largely as a result of this opinion of the Supreme Court that in recent years there has grown up a tendency to distinguish between "good trusts" and "bad trusts."

The case against the American Tobacco Company, also decided in May, 1911, was similar to that against the Standard Oil Company in charges, in reasoning and in verdict.

The Clayton Law and the Federal Trade Commission.—

The Democratic party came into power by the election of 1912, upon a platform which pledged more stringent regulation of business combinations. The result was the Clayton Act, approved October 15, 1914. This law was aimed at practices which Congress believed were contrary to public policy, but which were considered to have been insufficiently covered in the Sherman Law. Among the provisions of the Clayton Act was one which forbids discrimination in price between different purchasers, except under conditions generally admitted to be fair. Another clause prohibited the holding by one corporation of stock in another, "where the effect of such acquisition may be to substantially lessen competition" between the two companies, or "to restrain trade. By still another provision, the law forbids "interlocking directorates"—the practice of the

same individuals serving as directors in more than one company.¹

Another act of the Wilson administration, also passed in 1914, created the Federal Trade Commission, with important authority to investigate and regulate corporations.

The Packing Companies Dissolution.—The Federal Trade Commission at once began widespread investigations of business corporations and combinations, including those suspected of violation of the Clayton or the Sherman laws. One result of these investigations was a threatened federal prosecution of the "Big Five" companies which controlled a large share of the meat packing industry. These concerns were Armour and Company, Swift and Company, Morris and Company, Wilson and Company, and the Cudahy Packing Company. In addition to owning the principal packing plants of the country, the "Big Five" had extended their operations into various more or less remotely related lines of business, including the manufacture and sale of many food products not connected with meat packing. In preparing to proceed against the packers in the courts, the government took the position that a monopoly of the nation's food supply was possible, if not to some extent actually existent.

The packers' case never came to a decision. In December, 1919, an agreement was made between the packing companies and the federal Department of Justice, by which the corporations agreed to sell their interests in public stockyards and public cold storage warehouses, and to quit the retail meat business and all enterprises unrelated to meat packing. In return, the government dropped the proposed dissolution suit. Early in 1920 this agreement was sanctioned and confirmed by a federal court order.

¹ Certain definitions of the corporations affected, however, made the prohibition of interlocking directorates less drastic than it otherwise would have been.

In addition to the anti-trust cases to which reference has been made in this chapter, many other prosecutions, state and federal, have been carried on since the enactment of the Sherman Anti-Trust Law and of the state laws bearing upon combinations in restraint of trade.

But in the meantime, there has appeared a somewhat changed sentiment on the part of the public, which has come to have a better understanding of the nature of big business and of its virtues as well as its faults. While the laws and the court decisions against combinations found to have engaged in unfair practices have steadily grown more stringent, there has at the same time grown up a tendency not to condemn large corporations merely on account of their size. Thus the "rule of reason" pronounced by the Supreme Court in the Standard Oil and American Tobacco cases has gradually been adopted by the government and by the public.²

TOPICS FOR REVIEW AND DISCUSSION

1. How did Congress attempt to prevent combinations of railroads? (See Chapter, XXII.)
2. What were some of the causes of the anti-trust sentiment of the latter years of the nineteenth century? Has this sentiment become stronger or weaker?
3. Why were state laws ineffective to control combinations of capital?
4. When was the Sherman Anti-Trust Law enacted and what were some of its provisions?
5. What were some of the prosecutions under the Sherman Law? Give the important features of the decision in each case.
6. Give some of the points of interpretation of the Sherman Act by the Supreme Court, as drawn from the cases mentioned in this chapter.
7. What is the "rule of reason" in anti-trust prosecutions?
8. What are some of the provisions of the Clayton Act?

² For a discussion of anti-trust legislation and prosecution, and of the combination problem in general, more extended than is within the scope of this book, the student is referred to "The Trust Problem," by Jeremiah W. Jenks and Walter E. Clark.

9. What do you understand by interlocking directorates? What have been some of the effects of this practice?

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CHAPTER XXXII

PROGRESSIVE PROTECTION IN TARIFF LAWS

Importance of Tariff Issue.—From 1789 until 1923—and none would venture to predict how long into the future the practice will endure—lawmakers and voters have periodically contended in heated argument over the issues involved in one policy, at once financial, industrial, and political. That policy is the protective tariff. In campaign after campaign it has been the leading subject of contention. Seemingly settled by an overwhelming victory of one faction or the other, the battle always has been renewed. Contests over internal improvements, slavery, greenbacks, free silver, and “imperialism” have flamed up, then died out and in some cases have been all but forgotten except by the student of history; but the tariff issue is perennially fresh.

Out of this long story of contention a few definite tendencies have emerged. First, the issue of free trade has—for the time at least—disappeared. Downward revision there has been, and probably will be many times again, but the voices of those who would wholly level the protection wall are silent. This has come about in part because the tariff is in large measure, as once was said by a candidate for the presidency, a local issue. Legislators pledged to reduction of duties are prone to temper their ardor when they find that such reduction will adversely affect industries in their own districts. This has been demonstrated many times. In the long run, the trend of successive tariff bills has been upward, at the same time that their schedules have grown complicated to an extent that sometimes leaves publicists and financial experts debating over

their exact effects long after the bills have been superseded by others.

There remains to be noted one other phenomenon. Often an important tariff revision has been followed by the prompt defeat of the political party by which it was made. Apparently any kind of a tariff law is unsatisfactory to a large enough number of voters to cause the serious likelihood of the political chastisement of its sponsors.

Tariff Situation after the Civil War.—In earlier chapters we studied (see Chapter XII; Chapter XVII, page 173) the development of the tariff up to the close of the Civil War. We saw that in the earlier laws relating to import duties, taxes were laid mainly in order to raise money for the needs of the government, and that the purpose of protecting American manufacturers against foreign competition was incidental; that the protective principle gradually gained ground under the leadership of Henry Clay; that in the years preceding the Civil War there was a demand for reduction in duties, until the Act of 1857 removed much of the protection previously afforded; that the need for revenue during the war caused repeated increases, until by the Act of 1864 the average rate of import duties was 47 per cent.

The high tariffs of the war period were levied principally on account of revenue needs. By most people in the country it was expected that after the return of peace the import duties would be reduced to something resembling the moderate rates of the earlier acts. When the war closed, however, Congress found it expedient first to reduce the internal revenue taxes (see Chapter XVII, page 173) which were more unpopular than the tariff. This cut off a considerable source of revenue, and it was not difficult for the advocates of high protection to prevent any important change in import duties. A growing surplus in the Treasury resulted in a 10 per cent reduction of

tariff rates in 1872, but after the panic of 1873 the Treasury balance was greatly depleted, and the old rates were restored in 1875.

The Tariff of 1883—No serious attempt at tariff revision was made until 1883. A surplus in the Treasury, amounting to more than \$100,000,000, had been called to the attention of Congress by President Arthur in his first message.¹ In 1882 Congress authorized the appointment of a tariff commission to investigate the whole subject of the tariff and to make recommendations for revision. This commission, which was appointed by the President, recommended reductions averaging from 20 to 25 per cent. In 1883 a bill was passed, based in part on the report of the tariff commission. By this time, however, many had come to look upon the high duties of the war tariffs as a settled policy of the country, and particularly of the Republican party. This belief was encouraged by a growing number of manufacturing and other interests benefited by high tariff duties. The law of 1883, therefore, as finally passed, left the general tariff level within about 5 per cent of the former average.²

Cleveland's Efforts and Defeat; the McKinley Bill.—In the election of 1884 the Democrats were victorious for the first time since the Civil War, electing Grover Cleveland President over James G. Blaine, the Republican leader. The Democratic party naturally inclined toward lower tariff rates, but had not taken a definite stand on the subject in its 1884 platform.

¹ In 1880 James A. Garfield of Ohio had been elected President, defeating General Winfield S. Hancock. In July, 1881, President Garfield was assassinated. Chester A. Arthur, the Vice-President, then became President, serving the remainder of the term. Although Arthur had been a New York politician of somewhat doubtful methods, his service as President was creditable.

² A modern tariff act is a series of complicated schedules, and the articles listed include some that are seldom if ever imported, as well as those of which the importation reaches high figures. Each new law generally makes some changes in conditions, or in methods of levying and collecting the tax, as well as in the rates themselves. For these reasons it always is difficult to compare two modern tariff acts. Even expert students of the tariff are likely to disagree as to the average per cent of increase or reduction of rates.

President Cleveland, however, was a firm believer in tariff reduction. In messages to Congress in 1885 and 1886, and in a special message in 1887, he urged revision. The President's arguments were supported by the fact that the surplus in the Treasury amounted to about \$140,000,000, and that the huge store of cash in possession of the government threatened serious disturbances to the financial system of the country.

The Democrats in Congress, however, by no means were united upon a policy of tariff reduction. The Mills bill of 1888, so named for Roger Q. Mills, chairman of the Ways and Means Committee of the House of Representatives, was hotly debated, and finally passed the House. It failed in the Senate, where the Republicans held control.

In the campaign of 1888 Cleveland was defeated for reelection. The Republicans again gained control of the national government, with Benjamin Harrison as President. The Republicans looked upon their success as a popular rejection of Cleveland's tariff policies. Protection became more than ever before—perhaps more than ever since—a definitely accepted party policy. A whole system of political doctrine had been built up, based largely upon the contention that American manufacturers and American workingmen needed to be protected against the competition of goods produced under conditions of lower wages and smaller profits than those enjoyed in the United States. To the contention that lower tariff levels would bring cheaper commodities, the reply was made that cheap goods would be purchased too dearly if they resulted in the impoverishment of American wage-earners. The "full dinner pail" became a party symbol of prosperity. A new tariff act, the McKinley bill—so named for William McKinley of Ohio, chairman of the House Ways and Means Committee—was passed in 1890. The McKinley tariff made important changes in the schedules of duties, and raised the average rate to more than 49 per cent, the highest ever levied up to that time. The

protective principle was applied to farm products, duties being levied upon grains and potatoes. The rates were increased on iron and steel and on certain grades of cotton and woolen goods. Sugar was exempted from duty, but to encourage its domestic production a bounty of 2 cents a pound was offered for all sugar grown in the United States.

Republican Defeat and the Passage of the Wilson Bill.—

The congressional elections of 1890 brought a political overturn. The Democrats gained control of the House of Representatives, and McKinley himself was defeated in his Ohio district. Two years later Cleveland, again nominated by the Democrats, defeated Harrison. By this time the tariff had become the chief issue between the two dominant parties. It was inevitable, therefore, that the Democrats, now definitely in control of the presidency and of both houses of Congress, should attempt a revision. Under the direction of William L. Wilson, chairman of the Ways and Means Committee, a bill passed the House of Representatives providing for a considerable reduction in tariff rates and for a tax on incomes of more than \$4,000 a year.³ In the Senate the bill was subjected to many amendments, most of them in the direction of higher protection. A Senator who took part in the debates on the bill later said: "We were all, Democrats as well as Republicans, trying to get in amendments in the interest of protecting the industries of our respective states."

As finally passed, the bill reduced the average level of duties to slightly less than 40 per cent. Wool was admitted free, as were lumber and copper. The duty on raw sugar was restored. This Wilson-Gorman bill was not satisfactory to President Cleveland, but instead of vetoing it he permitted it to become a law without his signature, August 27, 1894.

³ This income tax was held to be unconstitutional. The latter federal income tax was levied after the adoption of a constitutional amendment.

The Tariff of 1897.—In the election of 1896 the Republicans were restored to power, with McKinley as President. Although the campaign had been fought on monetary rather than on tariff issues, the Republicans naturally proceeded to pass a new tariff law to replace that enacted by the Democratic Congress. The Dingley Act of 1897 was closely similar to the McKinley Law, but with somewhat higher rates. The average was about 57 per cent. Among the articles upon which the rates were higher than those of the McKinley Act were wool and woolen goods. Lumber was replaced upon the dutiable list, and hides, which always before had been admitted free, were required to bear a tax.

The Payne-Aldrich Law.—Few and unimportant changes were made in the tariff for more than a decade after the passage of the Dingley Act. The Republicans were continuously in power, and the Democrats turned their attention to other political issues. Within the Republican party, however, there grew up a movement in favor of tariff revision, and this was given impetus by the popular attacks upon the "trusts," some of which were supposed to have been built up largely with the aid of the high protection afforded by the McKinley and Dingley laws. In the campaign of 1908, the Republican platform said :

The Republican party declares unequivocally for a revision of the tariff by a special session of Congress immediately following the inauguration of the next President. . . . In all tariff legislation the true principle of protection is best maintained by the imposition of such duties as will equal the difference between the cost of production at home and abroad, together with a reasonable profit to American industries.

In his inaugural address, President Taft spoke in favor of a downward revision of the tariff, and in accordance with the

platform pledge he called a special session of Congress, which attacked the problem of tariff revision. The result was the Payne-Aldrich Act of 1909. This law restored hides to the free list, and reduced the duties on some other commodities. Sugar from the Philippine Islands, to a total amount not to exceed 300,000 tons a year, was admitted free, and the duty on Cuban sugar was made 20 per cent less than that upon sugar from other foreign countries. The cotton and woolen schedules were little changed. While defenders of the Payne-Aldrich Law maintained that it constituted a decided downward revision, it was attacked as being almost, if not quite as high on most necessities of life as had been the Dingley bill. It was made a target by the Democrats, who secured control of the House of Representatives in 1910 and elected Woodrow Wilson to the presidency in 1912.

The Democrats and the Underwood Tariff.—One result of the Democratic victory was the Underwood tariff of 1913. The bill took its name from Oscar Underwood of Alabama, chairman of the Ways and Means Committee of the House. This act reduced the duties on 958 articles, increased them on 86, and left the rates on 307 articles unchanged. Wool was placed on the free list, and sugar was to be admitted free after May 1, 1916. Duties on woolen and cotton goods were sharply reduced. Pig iron, steel rails, and iron ore were placed on the free list. The act included an income tax provision, which was authorized by a constitutional amendment ratified in 1913.

The Democratic Defeat and the New Republican Tariff.—Before the Republican party had been restored to power, the World War had been fought and many new issues had arisen, partially obscuring that of the tariff. With the election of President Harding in 1920, however, the new Republican Congress proceeded to revise the tariff once more. Late in 1922,

within a few weeks of the congressional elections, the McCumber-Fordney tariff bill was passed and signed by the President.⁴

The McCumber-Fordney bill in general made sharp increases over the rates in the Underwood Law, returning to the principle of high protection. By some critics it was asserted that the average duties were higher than in the Payne-Aldrich Law. A new provision gave the President, with the advice of the tariff commission, authority, until July 1, 1924, to raise or lower particular schedules, to the extent of not more than 50 per cent. The President also was authorized, if economic or other conditions warranted such action, to substitute for the foreign prices of imported goods the prices which the goods were expected to bring when sold in the American market, in determining the tariff which would be paid on such imports. Through these "elastic" provisions it was expected that the President would be able to prevent the dumping of foreign goods on the American market in a manner that would be detrimental to American producers, or, on the other hand, to prevent excessive increases in the prices of commodities.

TOPICS FOR REVIEW AND DISCUSSION

1. Why was not the tariff reduced immediately after the Civil War?
2. What was the effect of the tariff of 1883 upon the general average of tariff rates?
3. Why was not the tariff reduced during Cleveland's first administration?
4. Why have the Democratic revenue laws enacted since the Civil War been moderately protective, rather than free trade or for revenue only?
5. What was the general effect of the McKinley bill? Of the Wilson bill? Of the Dingley bill? Of the Payne-Aldrich bill?

⁴ This tariff law was the result of more than two years of effort in Congress. The (Republican) Ways and Means Committee of the House began holding hearings in 1919. A so-called "emergency" tariff, increasing many rates over those of the Underwood Law, was passed, effective May 18, 1921. The original Fordney bill, introduced in the House June 29, 1921, was amended some 3,000 times in House and Senate before it finally was passed in both houses.

6. What were the general effects of the Underwood Law upon tariff rates?

7. What were some of the provisions of the tariff of 1922?

8. Is it a fact that since the Civil War the party which revised the tariff usually has been defeated at the next election?

9. Study in an encyclopedia or other reference work the life of William McKinley; report on his influence in establishing protection as a fixed policy of the Republican party.

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CHAPTER XXXIII

COINAGE CONTROVERSIES AND THE SILVER ISSUE

Controversies over Currency.—Throughout American history the subject of currency has been one which has caused endless controversy, bitter sectional strife, and social and political upheaval. We have observed some of the earlier stages of these struggles. From the colonial period, when the lack of a sufficient circulating medium was a serious impediment to the growth of trade, down to the period following the World War, when a half-forgotten silver issue has come to the front to perplex a generation to which "greenbackism" and "free coinage" are terms of political history, the currency subject has been a recurring problem.

In part, this persistence of the money question has been due to causes inherent in the nature of national and international conditions. The United States has had its development in an age in which successive discoveries of new stocks of the precious metals have unsettled the money supply of the world. We noted (see Chapter I, page 17) that the discoveries of gold and silver in the Americas, by flooding Europe with money, helped to bring about the conditions which in part led to the rapid colonization of the New World. The much later discoveries in California, in South Africa, and in Alaska had other, but no less important effects, by lowering the relative value of gold, increasing commodity prices, and sometimes enhancing the value of silver.

Furthermore, the United States during a large part of its history has been a nation in which an older part of the country held most of the wealth, while a far-flung frontier was in-

habited by pioneers who often were debtors. In our study of the greenbacks we observed some of the effects of this condition. More of them will be observed in this chapter.

But the acuteness of the money controversies in American history has not always been due wholly to natural causes. Often it has been added to by the fact that the exceedingly intricate matter of finance has been made the subject of political manipulation. The average lawmaker is not an expert in the field of finance, which is not particularly to his discredit, for few men in any walk of life are qualified by knowledge and experience to deal fundamentally with the subject. Too often, moreover, financial legislation has been devised to meet policies of partizan expediency, without calling forth such wisdom as the party leaders actually have possessed. It is no particular cause for wonder, then, that the monetary record of the United States is not among the most creditable aspects of our national annals.

Conditions of Civil War Period.—During most of the period before the Civil War the coinage system of our country was based on what is known as “bimetallism”; i.e., gold and silver were minted upon the same basis, and both were legal tender. In considering the early efforts of the government to secure a satisfactory supply of metallic money, we have noted (see Chapter VIII, page 87) that the changing relative values of gold and silver as commodities of commerce made it necessary to alter the ratio, or the relative value for coinage purposes, and that finally, in order to keep a supply of silver coin in circulation for change, the government reduced the amount of pure silver in the coins of less value than the dollar, and limited their legal tender quality, thus making them what is known as “token money.” The dollar itself was little seen in circulation; from 1792 until after the Civil War, the silver dollars coined had amounted to only about \$8,000,000.

During the Civil War and until the resumption of specie payments (see Chapter XIX, page 195) practically all the money in circulation was paper; the subject of coinage seldom was discussed. When the government again began to pay out gold from the Treasury, however, coins came into more or less general circulation. Their reappearance brought a host of problems, economic, social, and political, some of which we shall consider in this and the following chapter.

The Demonetization of Silver.—Even before the resumption of specie payments, some men connected with the government had suggested a revision of the coinage laws. In 1869 a government committee was appointed to consider the subject, and in 1873, following the recommendations of this committee, Congress enacted a new statute relating to coinage. By one of the provisions of this law, the silver dollar was dropped from the list of coins to be struck off at the mint. As the other silver coins already had been reduced to the status of token money, this “demonetization of silver” put the United States upon the “gold standard”; that is, all coinage was based upon the value of gold.

The action of Congress in discontinuing the authorized coinage of the silver dollar attracted little attention at the time the law was passed. Probably few people in or out of Congress realized that it had any unusual significance. As has been stated, the money which circulated in 1873 was practically all paper. Silver was being mined in the United States in increasing quantities, but its commodity price was more than its coinage value, the silver in a silver dollar being worth about \$1.02; therefore no one cared to have it minted into coins.

Within a few years, however, the situation was radically changed. The production of silver had gained rapidly, and silver mining had come to be one of the leading industries in several western states. But as the production of silver in-

creased, its price fell. The white metal had been wholly or partially demonetized in several European countries, and the world supply had come to exceed the demand. The ratio of its value to that of gold, which for many years had stayed close to 16 to 1, began to shift rapidly, and to the disadvantage of silver. The commercial ratio was 16.62 to 1 in 1875; 18.04 to 1 in 1880, and reached 31.60 to 1 in 1895.

Threatened with ruin as the result of the constantly falling price of their product, the silver miners turned to the United States mint as the only means of keeping the value up. Then it was that the demonetization of silver came under general notice; by about 1876 it was being roundly denounced as the "Crime of '73."

The Agitation for Cheap Money.—The silver producers did not lack for support. In our study of the greenbacks (see Chapter XIX, page 193) we saw the growth of a sentiment favoring a larger supply of money. Now, the question of how much money is needed to conduct the business of a country is one upon which are based endless disagreements. The earliest use of money was as a medium of exchange; that is, something for which other articles of value can be procured. This is still one of its most important functions. It is essential, therefore, that there be enough money in the country to serve for the business transactions in which it is used. Just how much that is, can never be determined with accuracy. In present-day practice the problem is complicated by the large use of bank checks, and of credit, in the larger transactions.

Although the amount of money required for business needs is uncertain, the volume in circulation has numerous and important results. Money, like other things of value, is subject to the law of supply and demand. As the supply increases or the demand falls off, the value declines; as the supply runs short, or new demands arise, the value advances.

What we call the "value" of money is measured by its purchasing power, and changes therefore are seen most easily in the prices of the commodities for which money is exchanged. Thus, when money is plentiful, its value falls and prices of food and clothing rise; when money is scarce, its purchasing power is high, and prices fall. This principle applies even if there is no change in the quality of the money itself. In fact, many of the price increases of the last century have been due to additions to the world's supply of gold, which is conceded to be the best and most stable money in existence.

Moreover, it is a significant fact that a supply of money somewhat exceeding the needs of trade usually results in ready spending, brisk demand for commodities, and superficial "good times." Men are accustomed to measure their incomes in dollars. They do not readily readjust their financial conceptions to an altered purchasing power. Thus the man who sees his income increase, in terms of money, feels himself rich. The frenzied efforts to spend money, in the years immediately following the World War, were only a somewhat extreme example of a tendency which has been observed many times in the past.

But the business stimulus of cheap money is not wholly a phenomenon of psychology. In times of an excess supply of currency, credit usually is plentiful. Thus men are encouraged to expand their business ventures on borrowed capital. Moreover, they may do this in the belief—which may or may not be well founded—that the purchasing power of money will continue to decline, and that they will be able to repay their debts in yet cheaper money than that which they borrowed.

This observation brings us to another fundamental fact in the economics of currency. The fluctuating value of money has an effect upon the relations of debtors and creditors. Debts usually are contracted in terms of money—in the United States, in dollars—and are repaid in the same way. If a debt

is contracted when money is scarce and high and repaid when money is plentiful and cheap, the debtor returns less in actual value than what he borrowed; when the conditions are reversed, he pays more. It is to the interest of the debtor, therefore, to have money increase in volume and fall in purchasing power; the interests of the creditor lie in the opposite direction.

Now, in the seventies and eighties, and particularly in the years following the panic of 1873, prices steadily declined. Men attributed this price decline and the stagnation of business with which it was accompanied to a scarcity of money, and the demand for more money became insistent. The farmers in the west and south largely took the lead in this movement. With their crops steadily falling in price and with their mortgages payable in money, the purchasing power of which was constantly increasing, their situation was truly unfortunate, and it is not surprising that they were easily enlisted upon the side of the advocates of more and cheaper money.

With the greenbacks again redeemable in coin, and with the government committed to a policy of not again inflating the currency with irredeemable paper, the advocates of cheap money turned naturally to silver.

The Bland-Allison Silver Purchase Act.—With the silver producers allied with the farmers of the west and south, and with other elements in the country convinced that the coinage of more silver money would be desirable, a determined effort was made to induce Congress to “do something for silver.” The first tangible result was the Bland-Allison Silver Purchase Act of 1878. Under this law the Secretary of the Treasury was required to purchase silver bullion at the market price, in amounts not less than \$2,000,000 and not more than \$4,000,000 worth a month, and to coin it into dollars weighing 412½ grains. The dollars thus coined were made legal tender for all debts except those for the payment of which

another kind of money was specified in the contracts. The act also provided that the Secretary of the Treasury might store the new silver dollars in the federal Treasury and issue, in their stead, paper "silver certificates" in denominations of not less than \$10. As the law actually worked out, most of the new coins were stored and replaced in circulation by the silver certificates. To meet the increasing demand for this kind of paper currency, Congress in 1886 authorized the issuance of silver certificates in denominations as low as \$1.

The Bland-Allison Act was in force until 1890. Under its provisions, the United States government coined 378,166,000 silver dollars. It had been predicted by opponents of the act that the increase of silver coinage would cause a harmful inflation of the circulating medium. No disastrous results followed, however, partly because of the expanding business of the country, which called for increasing amounts of money, and partly because during the years in which the law was in effect the volume of bank currency in circulation declined, thus making room for the new silver dollars and equivalent silver certificates.

The Sherman Silver Purchase Act.—As the years passed, the Bland-Allison Act proved not to be sufficiently far-reaching to satisfy the silver advocates, as a concession to whom it originally had been passed. Agitation increased for absolute free coinage of silver; that is, for a system under which the government would make into coins any amount of silver brought to the mint.

The election of 1888 resulted in a sweeping victory for the Republicans and the election of Benjamin Harrison as President. For this victory the Republicans were to a considerable extent indebted to the western states, which almost uniformly had supported Harrison. These states were largely interested in the silver industry and in them much of the sentiment for

free coinage had started. The Republican Congress, therefore, was considered to be more than ever under obligations to "do something for silver."

In 1890, therefore, was passed the Sherman Silver Purchase Act, which practically doubled the amount of silver to be bought by the government, bringing it, in fact, up to substantially the output of the American mines. The new law provided that the Secretary of the Treasury should purchase 4,500,000 ounces of silver bullion a month, paying the market price, but not more than \$1 for 371.25 grains. To pay for this silver, the Secretary was instructed to issue Treasury notes, in denominations down to \$1. These notes were to be legal tender, except when otherwise stipulated in contracts, and were to be redeemed by the government on demand in gold or silver coin. The redemption clause was interpreted to mean that the holder of the notes could select the metal in which they should be redeemed.

The Repeal of the Sherman Law.—The Sherman Law remained in force about three years, during which time the government purchased not far from \$156,000,000 worth of silver, issuing the new Treasury notes in payment. Retirement of these notes began in 1900.¹

In 1892 the Democrats carried the election and Grover Cleveland, an uncompromising opponent of the theory of money inflation, was again installed in the presidential chair. Then the disastrous panic of 1893 swept the country. Among the many effects of this crisis, one of the most serious was its demoralization of the government's financial situation. The Sherman Silver Purchase Law had resulted in the overcrowding of the currency with silver coin and silver certificates, as well as with the Treasury notes issued in payment for the

¹ Retirement and redemption are terms of different meaning. Notes which are redeemed are not necessarily retired, but may be paid out again and thus returned to circulation.

silver. In the meantime, the price of silver steadily declined, until in 1893 the silver in a dollar was worth only 60 cents, and in 1894 only 49 cents. Gold coin thus was worth, in terms of silver, more than its face value. Following the principle of the Gresham law (see Chapter VIII, page 88) gold began to be bought up for melting or for export. One of the sources for obtaining this gold was the United States Treasury. Greenbacks and the new Treasury notes were presented in large quantities for redemption in gold, and much of the gold thus drawn from the Treasury was shipped out of the country. As fresh notes were issued to pay for fresh purchases of silver, they were presented for redemption in gold. Thus silver largely replaced gold in the federal Treasury, and the gold reserve maintained for the redemption of greenbacks, which customarily had not been allowed to fall below \$100,000,000, dwindled with a rapidity alarming to the government. Between 1893 and 1896, inclusive, the government several times was forced to sell issues of bonds—occasionally on terms which were criticized as bad bargaining—to obtain the gold that was needed to make good its redemption pledges.

In the meantime, President Cleveland had in 1893 urged upon Congress the repeal of the Sherman Silver Purchase Law, which he considered largely responsible for the financial difficulties of the government. After a long resistance by the silver advocates, particularly in the Senate, the advice of the President was followed and the Silver Purchase Act was repealed.

It will be noted that the Sherman Act, a concession to the advocates of the free coinage of silver, was passed by a Republican Congress, and that John Sherman, its sponsor, was a representative of extreme republicanism. No Republicans voted against it, nor was a single Democratic vote recorded in its favor. Its repeal was at the demand of a Democratic President. As the depression following the panic of 1893

gradually was overcome, and as the time for the opening of the presidential campaign of 1896 approached, the stage was being set for a new alignment of forces on the money question, which was to have momentous effects upon American political and economic affairs.

TOPICS FOR REVIEW AND DISCUSSION

1. What is bimetallism? What is token money? What is meant by legal tender?
2. What is Gresham's law? (See Chapter VIII.)
3. Why were few silver dollars coined in the United States before 1873?
4. Why was the country on a paper basis in the years immediately following the Civil War?
5. What was the demonetization of silver? When and how did it take place?
6. What were the causes for the demand for free coinage of silver; (1) by the silver producers; (2) by the western farmers?
7. What was the Bland-Allison Act? The Sherman Silver-Purchase Act?
8. Describe the circumstances leading to the repeal of the Sherman Act.
9. Does plentiful and cheap money improve business? How, why, or why not?

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CHAPTER XXXIV

THE CAMPAIGN OF 1896; LATER COINAGE DEVELOPMENTS

New Alignment on Silver.—We have traced the growing controversy over the coinage of silver, and have seen how Congress, in the laws of 1878 and 1890, gave increased recognition to the demands of the silver producers and of those who believed that the country would reap a benefit from a more plentiful supply of money. It will be remembered that the Sherman Law of 1890 was a Republican measure, and that it was repealed, during the panic of 1893, on the appeal of a Democratic President.

In the campaign of 1896, however, there was a distinct realigning of forces on the money question. The Republican party, not without some hesitation, came out in favor of the gold standard and against bimetallism or the free coinage of silver. In the Democratic national convention there was a heated controversy, which ended in a platform declaration in favor of the free coinage of both gold and silver, at the ratio of 16 parts of silver to 1 part of gold. William Jennings Bryan, a young man of attractive personality and persuasive eloquence, who had served briefly in Congress as a representative from Nebraska, was nominated for President. The Republicans nominated William McKinley, sponsor for the McKinley Tariff Law of 1890.

The controversy over silver caused serious splits in the parties, many Republicans deserting their political affiliations to vote for Bryan, and many Democrats, especially in the east, refusing to support Bryan and free silver. In the meantime, there had grown to impressive strength a new movement, one

of the most extraordinary in American political and economic history.

The Rise of the Populist Party.—We already have noted the depression of agriculture in the years following the Civil War. Harassed by debt, with the prices of their products declining, and with a succession of bad crop years, the farmers of the west and south were constantly on the brink of ruin. Under those circumstances, it was not unnatural that they attributed their difficulties to the growth of corporate wealth in the east, especially as represented by the railroads, and that many of them were eager to enlist in a campaign for a more plentiful supply of money, which, they believed, would improve their condition at least to the extent of enhancing the prices they would receive for their crops.

It was largely among the discontented farmers of the west that the national Grange (see Chapter XXII, page 222) attained its greatest strength. The Grange played a prominent part in the movement for railroad regulation in the seventies and eighties, and particularly in the agitation which led to the enactment of the Interstate Commerce Law. As the political functions of the Grange became less important, they were taken over by the Farmers' Alliance, a political organization which had started locally in Texas in 1876, and which before 1890 had formed a loose federation with the declining Knights of Labor. In state elections in 1890 the Alliance gained control of several western states, and nominated the successful Democratic candidates for many offices in the south. Two years later the Farmers' Alliance, with new strength from additional elements and with its name changed to the People's, or Populist, party, nominated a national ticket.

The Populists favored many projects of political and economic change. They enlisted in the fight for free silver, and in the campaign of 1896 they indorsed the candidacy of

Bryan, who was already the nominee of the Democratic party.

The Campaign of 1896 and the Republican Victory.—

There followed a campaign in some respects unparalleled in American annals. As never before—and perhaps as never since—the mass of the population turned its attention to financial questions. Free silver, the gold standard, the “50-cent dollar,” and the “Crime of ’73” became common subjects for discussion in the parlor and the kitchen, in the city club and in the cross-roads grocery. Bryan made an energetic campaign in which he gathered support far surpassing the expectations of the Republicans and of the gold standard faction among the Democrats. McKinley, whose political philosophy largely was summed up in protection, and who at the time of his nomination had expected that the campaign would be fought out on tariff lines, was forced to meet his antagonist on the field of currency.

The Democrats claimed that the gold standard had worked a hardship on the common people and had brought disaster to the west. The Republicans contended that free silver would debase the dollar to its commodity value—that is, the value of the silver content, then not far from 50 cents—and that the proposal of the Democrats amounted to partial repudiation of debts. The campaign ended in the election of McKinley and a Republican Congress.

Following the Republican victory of 1896, Congress, in 1900, enacted a new coinage act, definitely declaring for the gold standard. This law established the gold dollar as the unit of value. Silver coins remained legal tender to the same extent as before. A gold reserve was to be maintained, amounting to \$150,000,000. Thus the gold standard, which theoretically had been in effect since 1873, but which had been partially nullified, in its practical operation, by the laws of

1878 and 1890, became absolute. The advocacy of free silver survived for a time, but gradually it was submerged in new issues. Men believed that the coinage controversy was settled for all time.

The Pittman Silver Purchase Act.—The World War brought important changes in the money situation in America, Europe, and Asia. Among other things, it created an embarrassing scarcity of silver in the countries which depended largely upon that metal for their currencies. This shortage was felt particularly in India, and the British Empire was hard put to it to secure the needed supply.

In this emergency Great Britain turned to the United States, which had in its Treasury about \$490,000,000 of coined silver, represented in the circulation by silver certificates. An arrangement was made to sell silver dollars to England at a price of approximately \$1 an ounce. In accordance with this agreement, Congress in April, 1918, passed the Pittman Act, which was so named for Senator Key Pittman from Nevada.

Under the terms of the Pittman Act, the Secretary of the Treasury was authorized to break up or sell silver dollars held in the Treasury not in excess of \$350,000,000, the sale price to be not less than \$1 an ounce. Silver certificates were to be retired as the stock of silver dollars in the Treasury was depleted. To secure a fresh supply of silver coin, the Secretary was instructed to purchase from American producers an amount equal to that exported, at a fixed price of \$1 an ounce. Pending this replacement of silver coin, additional federal reserve notes were to be issued by the banks.

Under the authority of this act, the Treasury sold for export about 270,000,000 dollars, with a silver content of slightly more than 208,000,000 ounces. Up to March, 1922, the silver purchased from American producers amounted to

94,351,628 ounces.¹ Coinage of new silver dollars to take the place of those exported began in 1921, these being the first dollars coined since 1905. In the meantime, the price of silver, which had been well above \$1 an ounce during a part of the war period, had fallen until in the early part of 1921 it was quoted at 57 cents. By the spring of 1923 it had recovered to a price of more than 70 cents.

Throughout this period of reduced silver value, the government still was paying domestic producers the \$1 an ounce prescribed by the Pittman Act. This fact became the subject of severe criticism by those who thought that the price was excessive, and that it amounted to an unwarranted subsidy to the owners of silver mines. On the other hand, friends of silver maintained that the purchase provision of the Pittman Act, or something like it, ought to be made permanent. They called attention to the greatly increased cost of producing silver ore and bullion, and pointed out that the production of the metal in the United States, in spite of the encouragement afforded by the Pittman Law, had fallen from about 74,000,000 ounces in 1916 to about 56,555,000 ounces in 1920.

The coinage controversy throughout its history has been closely connected with the fortunes of the silver mining industry of the west. This industry, which developed rapidly in the years following 1860, and which was largely responsible for the settlement and growth of some of the Rocky Mountain states, went into a decline in the eighties and nineties, and in many formerly flourishing districts it never recovered its old prosperity. The declining price, with the constantly increasing cost of production, made silver mining an enterprise of doubtful profit, except under the most favorable circumstances. This, as has been pointed out, was an important factor in the

¹ At the close of March, 1923, the Director of the Mint reported that the entire purchase of silver from American producers, under the terms of the Pittman Act, probably would be completed by July 1, 1923.

long agitation for free coinage or some other expedient that would artificially raise the price of the metal above that fixed by the world's markets.

TOPICS FOR REVIEW AND DISCUSSION

1. How did the political parties align themselves in 1890 on the silver question? In 1896?

2. What was the Grange? (See also Chapter XXII.) The Farmers' Alliance? The Populist party?

3. What were the issues in the campaign of 1896? What was the coinage act of 1900?

4. Why did the British Empire seek to purchase silver in the United States during the World War?

5. What was the Pittman Act?

6. Was the Pittman Law a step in the direction of free silver?

7. What was the general effect of the Pittman Act upon the monetary system of the country?

8. Study in an encyclopedia or other reference work the history of the Populist party; can you name any of its principles which have since been generally adopted?

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CHAPTER XXXV

NATIONAL BANKS AND THE FEDERAL RESERVE SYSTEM

Changing Views on Banks.—Andrew Jackson's quarrel with Nicholas Biddle (see Chapter IX, page 93) shaped the policy which the government was to pursue for many years in its relations with banks. For three generations few were bold enough to raise their voices in behalf of a return, even in principle, to the system stamped out with the destruction of the second Bank of the United States. Tardily, in our own day, the United States shook off the spell of the Jackson legend and ventured to ally the government with banking power; but even then numerous safeguards were provided to ease the scruples of those who yet feared the effects of a central bank.

But it was not wholly the influence of Jackson which so long barred the government from participation in the most important financial affairs of the country. Throughout the history of the United States a large element of its population has had an instinctive fear of banking power. It was this fear, as we have noted (see Chapter VIII, page 89), which in large measure prevented the rechartering of the first Bank of the United States. The same fear, bred in his frontier environment, influenced Andrew Jackson, and rendered his mind a fertile soil for the suspicion and hatred which guided his later course.

In many periods of American history, legislation and political policies have been profoundly affected by the sentiments of the pioneers, who, through their boldness and enterprise, and the prestige of their achievements, have exerted an in-

fluence beyond that warranted by their numbers. Now, the pioneer, perhaps in part as a result of those very qualities which make him fit to grapple with the perils of the wilderness, is likely to have little patience with the cautious conservatism of the financier. It is not for nothing that in the melodramatic play, which is designed to make its appeal to the ruder element of the public, the part of the "villain" so often is played by one representing a banker or money lender.

Whatever other causes there may have been for American reluctance to ally the government with banking power, the policy has been the fruitful source of much loss, monetary confusion, and hindrance to economic development. The trail of ruined banks which in the past marked the progress of every serious business crisis was in itself enough to condemn the nation's financial policy. The lack of a paper currency at once stable and elastic caused, as we shall see, serious inconvenience.

The return to a policy of co-operation between the government and the banks was not made at a single step. From the downfall of the second Bank of the United States to the organization of the federal reserve system, there elapsed a period of some seventy-five years. It was a period of gradual development in financial policies as they affected the government.

The National Banking Act of 1863.—In our study of the economic effects of the Civil War we noted the passage of the National Banking Act of 1863 (see Chapter XVIII, page 188), under which banks with federal charters were authorized to issue circulating notes, secured by United States bonds which they purchased and deposited with the government. The banks thus chartered were not United States banks, in the sense in which the term is used in speaking of the first and second Banks of the United States, chartered in the early

years of the Republic (see Chapters VIII and IX). They were private banking corporations chartered by the government and endowed with definitely limited power to issue notes.

Nevertheless, the Act of 1863 marked a decided advance in American banking and finance. In the first place, it provided a ready market for United States bonds, as each national bank was required to purchase them in sums equal to at least one-third its capitalization. Then, it furnished a bank currency more stable and more easily controlled than had been the note issues of the various state banks, which notes, soon after the passage of the National Bank Act, were forced into retirement by a 10 per cent tax. By encouraging the banks to take out federal charters in order to obtain the note-issuing privilege, the law resulted in stricter and more uniform inspection and regulation of the larger financial institutions.

Decline of Note Issues.—The National Banking Act at first was looked upon somewhat coldly by the banks of the country, which showed no eagerness to exchange their state charters for those issued by the federal government. The prohibitive tax on note issues of state banks, referred to above, largely overcame this reluctance, and banks began to enter the national system in large numbers. By 1873, the circulation of national bank notes had reached \$339,000,000.

It soon was found, however, that the new banking system, although a decided improvement over earlier conditions, had serious shortcomings. It was observed that the circulation of bank currency began to decline after 1873, largely because the increasing price of United States bonds convinced many bankers that it was more profitable to sell bonds and loan the money received in payment than to hold the bonds and loan their own notes, which could be issued to the extent of only 90 per cent of the bank's holdings of bonds. It was anticipated that, as the government debt was reduced and the remaining

bonds further advanced in price, the national bank note circulation would be yet more diminished. To prevent this contraction of the currency, various amendments to the National Banking Act were passed. In 1900 Congress authorized the banks to issue currency up to the full value of their bond holdings, and at the same time permitted the incorporation of national banks with smaller capitalization than had been allowed under the original statute. As a result of this and other favorable legislation, the number of banks increased, as did the volume of bank currency in circulation.

Other defects in the national bank currency system, however, were not corrected. Among these one of the most serious was what was called the lack of elasticity. The circulating medium of the country, as we have noted, should be sufficient for, but not greatly in excess of, the requirements of trade. But these requirements are not constant. They vary with the seasons, with the activity of business, and with the state of credit. Under the national banking system, however, there could be little fluctuation in the volume of bank currency, except over considerable periods of time. Being issued only upon the security of United States bonds, it could not readily be expanded when business needs called for more currency. This shortcoming was felt particularly in the seasons of the year when the movement of crops required large amounts of cash, which often were difficult to secure.

Financial Panics and Their Effect upon Banks.—This lack of elasticity in the currency was most serious, however, in the periods of financial crisis, or panics, which followed each other at intervals of about ten years. We have noted some of the effects of these disturbances upon business, manufacturing, and employment. Upon the banks the effects often were disastrous. In times of stress, when the credit of even the strongest institutions was questioned, men were eager to secure

cash. Now, there is never enough actual cash in the country to pay every creditor and every bank depositor in full. Banks, even when perfectly sound, were unable to assemble enough cash in their vaults to pay all the depositors who appeared when a "run" was started. As a consequence, each of the serious financial crises left behind it the ruins of many wrecked banks, some of which had been in wholly sound financial condition. This occurred in the panic of 1873, in the somewhat less severe crisis of 1884, and in the panic of 1893. These bank failures, by contracting credit and shaking public confidence, added to the severity of the financial panics and of the business depression by which each was followed.

After the crisis of 1893 business recovered, and, stimulated by favorable conditions and especially by important discoveries of gold in Alaska, entered upon a period of unusual prosperity. Prices of most commodities advanced, manufacturing was expanded, and there was a keen demand for labor. This period of prosperity led to overexpansion of business, overcapitalization of industries, reckless speculation and extravagance, and the other symptoms by which wise financiers had come to foretell an approaching crisis. The crisis came in 1907, when a brief but unusually severe financial panic caused the failure of numerous banks and business concerns. In many cities the banks refused to pay out currency, but instead issued cashiers' checks or clearing house certificates which for a time circulated as money. This expedient was unlawful, but was tolerated as an emergency measure.

The Aldrich-Vreeland Banking Law.—The panic of 1907 called attention afresh to the need of a banking system under which solvent banks could obtain supplies of currency quickly enough to pay depositors under any circumstances. Many students of finance thought it would be desirable to permit banks, in time of emergency, to issue notes secured, not

necessarily by government bonds, but by their more ordinary resources in the form of municipal bonds and other approved collateral. Accordingly Congress in 1908 enacted the Aldrich-Vreeland Law. Under this act banks were permitted to form "national currency associations" for the purpose of issuing notes secured by approved state or city bonds and by other forms of collateral, including short-time notes representing loans to business men of established credit. In order to prevent the banks taking undue advantage of this privilege and issuing the newly authorized notes in times other than emergencies, the law provided for taxing the notes, the tax increasing with the time they remained in circulation.

The Aldrich-Vreeland Law remained in effect until June 30, 1915. It was not put to the test of a severe business crisis, but there is little doubt that in such a test it would at least have strengthened the position of the national banks. In the unsettled financial situation following the outbreak of the war in Europe, many banks issued notes under the provisions of the new law, but all these notes speedily were retired, as the law contemplated.

The Federal Reserve System Created.—One cause of the Aldrich-Vreeland Law authorized the appointment of a national monetary commission, composed of nine senators and nine representatives, to study the whole subject of banking and currency and report recommendations to Congress. The commission was appointed and made its investigation and its report, but no action was taken at the time. The attention which was being given the currency question, however, had caused a growing sentiment, in Congress and out of it, in favor of a revision of the national banking laws. Many men believed that a central bank, somewhat like the one destroyed by Andrew Jackson seventy-five years before, was needed to give the banking system and the currency the stability that

was desired. This was the situation when the Democrats came into power with the election in 1912 of Woodrow Wilson to the presidency. There was much speculation as to whether the Democratic party would depart from the ideas of Jackson and create a centralized banking system. Soon after his inauguration President Wilson recommended a reform of the national banking laws, and after some months a bill, approved December 23, 1913, created the federal reserve system.

The federal reserve system represented an attempt to harmonize the views of those who favored a centralized banking power with those of the men who feared that a central bank would exercise a dangerous financial monopoly.

The powers ordinarily entrusted to a central bank were divided among several banking organizations, and machinery was provided by which those institutions should co-operate among themselves and with the federal government. In this way Congress hoped to secure the advantages of a central national bank without the dangers which some saw in it.

The Machinery of the Federal Reserve System.—The federal reserve system is erected upon a foundation in which the national banks of the country, and such state banks as comply with certain requirements and enter the system, are the separate blocks. The country is divided into twelve districts, and in each of these districts there is a federal reserve bank. This bank is a corporation in which the stock is owned by the "member" banks of the district; that is, by all the banks in the district belonging to the federal reserve system. Each federal reserve bank is governed by a board of nine directors. Six of these directors are elected by the banks, but of the six, only three are bankers; the other three are chosen from among the business men or farmers of the district. Three directors, to complete the board of nine, are selected by the Federal Reserve Board at Washington.

The federal reserve bank in each district may be said to do the banking business for the banks. It holds their reserves, receives their deposits, buys the notes they take as security for loans, and furnishes them with currency. The federal reserve banks also have limited functions of a public nature, which need not here be discussed.

When the law first was put into effect, a committee composed of the Secretary of the Treasury, the Secretary of Agriculture, and the Comptroller of the Currency designated the federal reserve districts and selected the cities in which federal reserve banks should be established. These cities were Boston, New York, Philadelphia, Cleveland, Richmond, Atlanta, Chicago, St. Louis, Minneapolis, Kansas City, Dallas, and San Francisco. By a later amendment to the law, branch banks were founded in a few other centers.

To supervise the working of the entire system, the law provided for the creation of a Federal Reserve Board composed of the Secretary of the Treasury, the Comptroller of the Currency, and five other members to be appointed by the President with the approval of the Senate.

Currency under the Federal Reserve System.—The creation of the federal reserve system made a radical change in the bank currency of the United States. The national bank notes of the old form were not immediately withdrawn from circulation, although it was expected that they gradually would be retired. The law authorized two classes of bank currency of a new type. First there are the "federal reserve bank notes," which are secured by United States bonds and are in principle quite similar to the bank notes of the older type. In addition there are the "federal reserve notes," which are secured, not necessarily by United States bonds, but by other forms of collateral, including notes representing loans to business men, and are reinforced by a definite "reserve" of

gold. The federal reserve notes constitute the new element which the law of 1913 introduced into the currency of the country. Being issued upon the security of ordinary bank resources (although the class of paper which may be used as security is strictly defined), they may be expanded to almost any extent which is demanded by the needs of business and warranted by the financial strength of the banks. Thus sufficient currency can be issued for the demands of the crop-moving seasons, or for a period of expanding business, and, on the other hand, a part of the currency may be retired when it no longer is needed, or when the banks believe that a superfluous supply of money is encouraging unwise speculation or business inflation. Likewise, a bank which is fundamentally sound has no difficulty in securing all the currency it needs in order to withstand a "run." As a matter of fact, runs on banks are not likely to be started when depositors know that the banks can pay all claims in cash. Through the concentration of a great part of the bank reserves of the country in the federal reserve banks, where they can be used as most needed, the position of the banks in general is greatly strengthened.

Federal reserve notes are not legal tender, but their redemption, besides being secured by collateral and gold reserves, is guaranteed by the United States government. The law provides that in a time of great emergency the Federal Reserve Board may permit a bank to issue currency to a greater amount than its gold reserve ordinarily would warrant, but as a safeguard against inflation and unsafe banking, it is required that such excess notes shall be heavily taxed.

The Federal Reserve System in Operation.—The federal reserve system has operated through the period of the World War, the post-war expansion of business, and the depression of 1920-1922. In general it has given satisfaction, and, in

spite of occasional criticism, the American public has in the main given its approval. Largely on account of the reform in the banking system after 1907, the depression which began in 1920, although severe and far-reaching in its effects upon industry, commerce, and employment, was not marked by the bank failures which in the past had accompanied such periods and intensified the distress they caused.

TOPICS FOR REVIEW AND DISCUSSION

1. What were the main provisions of the National Banking Law of 1863, and how did it depart from the earlier laws in effect upon banking and currency? (See also Chapter XVIII.)
2. Why did the issue of bank notes decline after 1873? Why did it increase after 1900?
3. What were some of the elements of strength in the national banking system? Some of the elements of weakness?
4. What was the Aldrich-Vreeland Act? What was the fundamental change made by that law in the system for issuing bank currency?
5. What were some of the causes for the enactment of the Federal Reserve Law?
6. What are some of the leading provisions of the Federal Reserve Law?
7. What is a federal reserve district? A federal reserve bank? The Federal Reserve Board?
8. What are the distinctive features of a United States Treasury note? A silver certificate? A national bank note? A federal reserve bank note? A federal reserve note?
9. To what extent was the creation of the federal reserve system a return to the centralized banking principle?

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CHAPTER XXXVI

GOVERNMENT FINANCE DURING THE WORLD WAR

Outbreak of World War.—The financial enactments of the first Wilson administration (see Chapter XXXII, page 327; Chapter XXXV, page 351) were not destined long to function in a period of tranquillity. In August, 1914, war broke out in Europe, and within a brief time practically all the nations of that continent were engaged in the conflict. This war, even in its first years, had a profound effect upon business conditions in the United States and upon the financial problems of the government. In the early months of 1917 the United States entered the war on the side of Great Britain, France, and their allies, and from then until an armistice was signed in November, 1918, every energy of the nation was devoted to military purposes.

The cost of the war exceeded any previous expenditures over anything like the same period of time. Says one historian:¹

The total direct money cost of the war from April, 1917, to April, 1919, was estimated by the war department at \$21,850,000,000, an average of over a million dollars an hour, and an amount sufficient to have carried on the Revolutionary War a thousand years. In addition, loans were made to the Allies at the rate of nearly half a million dollars an hour.

Paying the Cost of the War.—Even before the United States became involved in the World War, the increases in the

¹ The United States since the Civil War, by Charles R. Lingley, p. 589.

military and naval forces deemed necessary by the national government had cost large sums, and had been the occasion for energetic measures to increase the revenue. On September 9, 1916, a revenue law was enacted, largely increasing the income tax, which had been levied in mild form as a part of the revenue law of 1913; imposing a federal inheritance tax and laying a tax upon profits derived from the sale of munitions of war to the European belligerents. A few months later Congress amended this law by increasing the inheritance tax and imposing a tax upon excess profits, that is, profits exceeding a specified per cent of capitalization or investment. Soon after this law was enacted, war was declared.

With the United States once enlisted in the war, it was realized that national expenditures would be upon a scale formerly unthought of. It was necessary for the government to decide upon a definite policy for raising the money. At the outset there were two general proposals. Some believed that the cost of the war should be paid immediately, by taxation, thus laying all the burden upon the shoulders of the generation which was engaging in the conflict. Others thought that the money ought to be raised mainly through loans, thus spreading the payment out over a long period of time. It was felt, however, that to raise the whole sum by taxation would be impossible, at least without the imposition of taxes which would amount to confiscation and would paralyze the productive efforts of the country. Accordingly, the policy adopted by the government was a compromise between the two views. About one-third of the necessary sum was raised by taxation, and about two-thirds by loans.

The issuance of inconvertible paper money, as during the Civil War, was not seriously considered at the time of the World War. In connection with the Liberty Loans, however, banks were permitted to retain portions of their subscriptions until the money was called for by the government, and this

in some quarters was criticized as an "inflation of credit" comparable to inflation of currency.

War Taxes and Their Effects.—Before the outbreak of the war the Democratic Congress had, as we have seen (see Chapter XXXII, page 327) sharply reduced the tariff rates. Throughout the war Congress adhered to a policy of comparatively low tariff rates, and import duties played a relatively minor part in the financial operations of the government. The revenue provisions enacted just before the United States entered the European struggle remained substantially unchanged until October, 1917, when a new and more drastic law was passed. By this statute, the income and excess profits taxes were considerably increased, and internal revenue and other levies were advanced. Heavy taxes were laid upon so-called luxuries, upon railroad tickets, and upon other things.

As a result of this legislation the revenues of the government advanced quickly. In the year 1918, the ordinary receipts of the government were in round numbers \$4,179,000,000, or approximately four times the average of the years immediately preceding the war. Of this total, customs duties (the tariff) furnished \$183,000,000; internal revenue taxes (including the income and excess profits levies) furnished \$3,695,000,000; and receipts from miscellaneous sources amounted to approximately \$300,000,000. Of the sum credited to internal revenue taxes, \$2,839,000,000 was from the income and excess profits taxes.

In February, 1919, a few months after the armistice was signed, a new law still further advanced the tax rates. After that legislation was in the direction of gradual reductions, as the unusual government expenses little by little were cut off.

Income and Excess Profits Taxes.—The figures just given show to what an extent the income and excess profits taxes

were relied upon in the financial emergency growing out of the war. These taxes were practically new in American history, partly because until the adoption of a constitutional amendment in 1913, federal income taxes had been held unconstitutional. In devising an income tax, Congress adopted the principle of progressive taxation; that is, the theory that a man of large income should pay more, proportionately, than one whose income was small. The lowest incomes were not taxed at all. In the law of 1919, the rate for the first year was 6 per cent on the first \$4,000 of income above exemptions, 12 per cent upon the remainder, and a graduated surtax which reached 65 per cent on that portion of an income which exceeded \$1,000,000 a year.

The excess profits tax was laid upon the earnings of business concerns, and was levied upon all profits in excess of a specified percentage of capitalization. In 1918, the tax in some instances was as great as 80 per cent of all profits over a set limit.

Government Borrowing During the War.—As was stated above, the government relied upon loans for the raising of about two-thirds of the funds needed for the expenses of the war. These loans, large beyond all precedent, were extraordinary also in the extent to which they were distributed among the people of the country. The first Liberty Loan had about 4,500,000 subscribers; to the fourth, about 21,000,000 different individuals subscribed.

The total sum raised by Liberty Loans and by the sale of war savings stamps was \$22,478,416,250, divided as follows:

First Liberty Loan.....	\$2,000,000,000
Second Liberty Loan.....	3,808,766,150
Third Liberty Loan.....	4,176,576,850
Fourth Liberty Loan.....	6,993,073,250
Fifth Liberty Loan.....	4,500,000,000
War Savings Stamps.....	1,000,000,000

At the end of August, 1919, the debt of the United States stood at the unprecedented total of \$26,596,701,648. Since that date, in spite of continuing high governmental expenses, the debt gradually has been reduced. On December 31, 1920, the total was \$23,744,963,381; on December 31, 1921, \$23,438,425,720; on August 31, 1922, \$23,042,755,934; on September 30, 1922, \$22,812,407,791; on March 31, 1923, \$22,722,603,333.

The Liberty Loan bonds were issued in denominations as low as \$50, and bore interest varying from $3\frac{1}{2}$ to $4\frac{3}{4}$ per cent. The issues had varying provisions as to total or partial exemption from the federal income tax.

Fluctuating Price of Liberty Bonds.—Liberty Loan bonds were subscribed to "at par," or at their face value. Within a comparatively short time, however, their market prices began to decline, until at the lowest point some of the issues were quoted at little more than \$80 for each \$100 of bonds.² This decline in the value of government securities was due to various causes, of which the most potent were, first, the fact that many people who had subscribed for bonds sought to sell them, sometimes even before they had finished paying for them, thus flooding the market; and, second, the increasing rate of interest paid upon money.

It must be remembered that money, in the form of loans, has a definite market value, which varies with changing business and financial conditions. A bond which bears a fixed rate of interest must be sold, if sold at all, at a price that will bring the buyer the market rate of interest on the money he actually pays. Thus a bond bearing 5 per cent interest must be sold at a discount when the prevailing rate on investments of equal desirability is 6 per cent; it may be sold at a premium when the

² In May, 1920, the Fourth $4\frac{3}{4}$ per cent Liberty bonds sold for 82. After that month the quotations advanced.

customary interest is 4 per cent. Now it happened that in the closing months of the war and in the period up to 1920 or 1921 the prevailing interest rates were relatively high. Bonds of almost absolute safety bore interest at 6 per cent or even higher. Therefore the people who purchased Liberty bonds insisted upon receiving prices which would bring them approximately that return upon the money they invested. This fact, combined with the flooding of the market by the eagerness of many subscribers to sell their bonds, largely brought about the low quotations.

After about the beginning of 1921 interest rates began to decline, with a corresponding advance in the price of securities, including Liberty bonds. The prices of the latter probably were given further support by the fact that by that time most of the people who wished to dispose of their holdings of war bonds already had done so, and the market no longer was oversupplied with these securities. By the early part of 1922 all issues of Liberty bonds had reached or passed their par value.

TOPICS FOR REVIEW AND DISCUSSION

1. What, in general, had been the change in the tariff by the law of 1913?
2. Why was the tariff relatively less important in the financing of the World War than in that of the Civil War?
3. What were some of the main provisions of the revenue law of 1916?
4. What were some of the principal sources of revenue during the war?
5. What is an income tax? An excess profits tax? An inheritance tax?
6. What were the Liberty bonds, in what sum were they floated, and how many issues were there? What were the war savings stamps?
7. Why did the market value of Liberty bonds decline after the war? Why did it advance after May, 1920?
8. What do we mean by the market value of money?

9. What is the theory of a progressive income tax? Is it equitable? Is it right to exempt some incomes from taxation?

10. Is it true that the Liberty Loan subscriptions caused a permanent increase in the investing habit among Americans?

11. With the lessons of the World War before it, how do you think the government would proceed in financing another similar conflict?

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CHAPTER XXXVII

TRANSPORTATION PROBLEMS OF THE WAR PERIOD AND AFTER

Test of Government Operation.—For many years to come, arguments for and against government operation of industry probably will be based upon the experience of the United States with railroad management during the World War. Federal administration of the railroads provided a laboratory test, upon an immense scale, of the strength and weakness of public administration. The results have been reported, tabulated, and interpreted—but in the interpretation each observer has followed his own method of reasoning, with the outcome that wholly different conclusions have been reached.

There are those who maintain that war experience demonstrated conclusively the superior merits of government operation; that the means adopted for keeping the transportation system from a complete breakdown under the strain of a war emergency were the most efficient to be found; that government operation brought the greatest possible measure of justice to public, to laborer, and to stockholder; and that the expense and inconvenience suffered by all parties were merely incidental and inevitable.

Others assert that the railroad experiment proved the wastefulness, inefficiency, and general undesirability of public operation of large-scale industry; that every gain under public management could have been attained, more easily and cheaply, if the railroads themselves had been permitted to adopt the expedients which were ready to the hand of the federal director; that shippers, travelers, and railroad owners shared an enormous loss; that the confusion incident to government ad-

ministration will be a burden upon the business of the country for many years.

Before attempting to pass judgment between these conflicting claims, it will be well for the student to give attention to the leading facts of war-time control of transportation.

Railroad Situation Before the World War.—The development of railroad transportation in the United States already has been studied (see Chapters XI, XXI, XXII). During the years following the Civil War and up to the early part of the twentieth century, the expansion of railroads had been rapid and the earnings of their owners, in most periods, generally high. After about 1906, however, railroad revenues began to decline. Many roads went through bankruptcy, and railroad stockholders suffered heavy losses. This decline in railroad earnings was due in part to increasing costs of labor, material, and supplies, and in part to the more rigid supervision exercised by the states and by the federal government over rates and other traffic matters. Doubtless, also, the unwise financing of an earlier period had its influence. Many railroads were carrying burdens of overcapitalization which made ruinous inroads upon their earnings.

Whatever may have been the causes, railroad operation and ownership from 1906 to about 1915 was usually unprofitable, and in the last-named year 42,000 miles of railroad, or about one-sixth of the total mileage of the country, was in the hands of receivers. One result of this condition was seen in the increasing tendency of capital to avoid railway securities as investments. With their earnings reduced, and with new capital difficult to obtain, the railroads began to cut down the sums expended for improvements and extensions. In the later years of the period referred to, few new lines were built and expenditures for maintenance, equipment, and repairs were held to a minimum.

In the meantime, railroad regulation by the government and by the states had grown continuously more severe. The transportation law of 1910 (see Chapter XXII, page 224) added to the powers of the Interstate Commerce Commission and to the restrictions thrown about the carriers. In addition, it created a Commerce Court, to act upon appeals from orders of the Interstate Commerce Commission. This court functioned until 1913, when it was abolished. In 1913 also, Congress passed the Federal Valuation Act, which required the Interstate Commerce Commission to make assessments of the physical properties of the railroads. This work, in the early months of 1923, had been in progress for several years, but was yet incomplete.

The Railroads at the Outbreak of the War.—The decline in railroad earnings was halted abruptly within a short time after the outbreak of war in Europe. In 1915 and 1916 the shipment of munitions and supplies to the belligerents caused a large expansion of freight tonnage, and the railroads entered upon a period of unusual activity.

Then came the entrance of the United States into the war, with a resulting unprecedented demand for railroad transportation and facilities. With many railroads already in poor condition as a result of the years of unprofitable business, the roads were not equal to the task placed upon them. The American Railway Association made an effort to carry the burden by establishing a committee of railroad presidents to unify and co-ordinate the railroad traffic of the country, and for a few months this system functioned with moderate success. Soon, however, it was found that the utmost efforts of the railroad officials were insufficient to prevent congestion, delay, and demoralization of traffic. The situation was made worse by lack of co-operation between different departments of the government, each of which thought its particular branch

of federal business ought to be given preference. In the last half of 1917 the country seemed threatened with a breakdown of its transportation system, with resulting disaster to the war efforts of the government. Then it was that President Wilson, in a proclamation issued December 26, took over the railroads in the name of the government. Government operation became effective January 1, 1918.

Government Operation of Railroads.—The method by which the railroads thus taken over by the government¹ should be operated was prescribed by Congress in the Federal Control Act of 1918. Supreme authority was placed in the hands of a director general of railroads, appointed by the President and responsible to him.² Each road was under the direct control of a federal manager, often the president or some other high official under private operation, and each federal manager reported to one of seven regional directors. The regional directors were responsible to the director general.

The law prescribed that the railways should be returned to private management within twenty-one months after the conclusion of peace. As compensation to the owners, the government agreed to pay a rental, which for each road was to be equal to the average net operating income for three years ended June 30, 1917. The law provided that repairs and maintenance were to be kept up, or if they were not kept up, that the government should pay for any deficiency.

Effects of the Governmental System.—The government took charge of the railroads at a critical period of the war, when it was considered imperative that transportation of

¹ While federal control was extended to practically all the railroads of the country, there were a few, mostly small and unimportant, which were not taken over by the government.

² As first director general, President Wilson appointed William G. McAdoo, the Secretary of the Treasury. McAdoo resigned in January, 1919, and was succeeded by Walker D. Hines, an eminent railway official, who served during the remainder of the period of federal management.

troops and of war materials be furnished promptly and effectively. The director general, whom the Federal Control Act had vested with almost dictatorial powers, proceeded to consolidate freight and passengers routes, thus eliminating competition among roads; to establish priority for certain classes of essential traffic; and in other ways to operate the railways of the country as one great system, the controlling purpose of which was to co-operate with the government in winning the war. To reach this end, methods were adopted which would have been contrary to the Interstate Commerce Law had the roads yet been under private management. It has been asserted that if the railroads under private management had been allowed thus to disregard the statutes relating to competition, to freight priority, and to rate fixing, the country could have secured all the benefits which came from public administration, and at a far less cost.

Labor problems early came to the attention of the director general. A considerable wage increase to railroad workers was granted, retroactive to January 1, 1918. During 1919 further wage increases were put into effect, and just before control of the railroads was relinquished by the government, the Railroad Administration negotiated with the railroad unions what were known as the "national agreements," embodying minute rules on the subject of railroad labor. It later was asserted by railroad owners that these national agreements added enormously to labor costs. Early in the period of government operation the director general created a Board of Railway Wages and Working Condition, and later three boards of adjustment were appointed, to pass upon disputes regarding wages and conditions of labor. Each of these boards had equal representation of railroad managements and of labor organizations.

In spite of the economies thought to be possible as a result of the elimination of competition among the railroads, it soon

was realized that federal operation was piling up a huge deficit. In order to increase revenues, the director general ordered a sharp advance in rates, averaging 25 per cent on freight and 20 per cent on passenger traffic. At the end of the first year, the Railroad Administration reported a deficit of more than \$200,000,000, and this without any allowance for depreciation or for neglected maintenance and repairs. The final deficit for the twenty-six months of government operation, including valid claims by railroads for reimbursements, was estimated by the director general in February, 1923,³ at \$1,800,000,000.

It is useless here to review, in more detail than already has been done, the many arguments that have been made for and against government operation of railroads, as it functioned during the World War. The verdict of history probably will be that the system secured the most necessary results—adequate transportation of troops and war materials, with a minimum of friction with railroad labor organizations—but at a tremendous cost in money and in inconvenience to the public. Whether or not the same or better results could have been secured at a less cost, through some method other than government operation, is a question upon which men probably will continue to disagree.

Return of the Railroads to Private Operation.—As the time approached for restoration on March 1, 1920, of the railroads to their owners, Congress enacted the Esch-Cummins Transportation Law of February, 1920, prescribing the method of restoration and the conditions under which the railroads should be operated. This law provided that the government should continue the rental payments, as under federal management, for six months after private operation was resumed. For the future, the Interstate Commerce Commission

³ Although federal control of railroads terminated March 1, 1920, the office of director general was continued, mainly for the purpose of representing the government in connection with the financial claims of the roads.

was instructed to establish rates which would bring a fair return upon the capital invested in the roads. This fair return was defined, for the first two years, as $5\frac{1}{2}$ per cent, with an additional $\frac{1}{2}$ per cent for improvements, making 6 per cent in all. However, the fair return of the Esch-Cummins Act was not guaranteed to the individual roads. The law provided that the railroads should be grouped by geographical sections, and that the 6 per cent return should be assured, not to each railroad, but to each group. Within the groups, earnings may—and do—vary widely between individual roads. The law provided no relief for the roads which earned less than 6 per cent; those which earned more were required to divide the excess with the government.

The law instructed the Interstate Commerce Commission to consolidate the railroads, for traffic purposes, into a few great systems. An effort was thus made to secure some of the admitted advantages to the roads under government operation.

For the purpose of adjusting the relationships between railroad managements and railroad workmen, the law created a Railway Labor Board, with authority to consider all labor questions and to render awards. The awards of this board were not made strictly enforceable. In the summer of 1922, in the course of a strike of railroad shop workmen, President Harding urged upon Congress the necessity of giving the Railroad Labor Board power to enforce its decisions upon railroads and workmen alike.

Soon after the return of the railroads to private operation, the carriers, together with business in general, suffered from a period of severe depression, which at the end of 1922 had not wholly passed. The conditions of the roads under the Esch-Cummins Act were therefore disappointing. The value of the law, and its defects, will not be possible of accurate judgment until a considerable period has elapsed during which business is normal.

TOPICS FOR REVIEW AND DISCUSSION

1. What were some of the causes for the decline of railroad earnings after about 1906?
2. What were some of the results of this decline?
3. What were some of the effects of the outbreak of the war upon: (1) operation of railroads, and (2) their revenues?
4. Why were the railroads taken over by the government during the war?
5. What were some of the main provisions of the Federal Control Act?
6. How did the government pay for the use of the railroads during the war?
7. What were some of the results of federal control upon: (1) operation, (2) revenues, (3) labor conditions?
8. What is the Esch-Cummins Law and what are some of its main provisions?
9. Do you think railroad regulation by the government and by the states before the World War was carried to an extent that made the loss to the public greater than the benefit?
10. Would it be wise to permit railroads under private operation to combine for the elimination of competition, as was done under government management?

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CHAPTER XXXVIII

WAR-TIME CONTROL OF INDUSTRY AND TRADE

Business Mobilized for War.—Government operation of railroads, described in the preceding chapter, was part of a vast system of control by which the government sought to bring all the resources of the nation into line behind a single purpose—the winning of the World War. This system functioned through a number of federal boards or commissions, which in some instances were given almost dictatorial power. The federal boards sometimes were aided by subordinate state and local bodies, or by voluntary associations of citizens.

This government control of business, starting in a modest way before the United States entered the conflict, expanded rapidly, until before the end of 1918 citizens of the United States had become accustomed to a degree of restraint never before exercised by the American government. Coupled with this restraint was a large measure of federal aid and co-operation, particularly for industries deemed essential to war activities.

It is useless here to enter extensively into the controversies which have raged over the wisdom, the justice and the expediency of one or another of the methods of business control to which the government had recourse during the war. The most sane attitude to take in relation to the whole subject is that the nation was exposed to a deadly menace, in the face of which it took emergency measures which are not to be judged by the customary standards of economics nor even those of ethics. This is the attitude which we may expect on the part of the fair-minded historian who writes in future years, and

with the benefit of a broad perspective denied to the generation which participated in the war.

Certain it is that the period of war control gave a decided impetus to that tendency toward government interference with business, the growing importance of which we already have noted. The hope of business, as of society, depends upon the common sense of the American people, which generally may be trusted, in the long run, to take advantage of the good points of any system and to reject its uneconomic extremes. Thus we may expect, as the years pass, to see the exercise of an intelligent discrimination, by which those forms of government interference and co-operation with business will be retained which are of advantage to industry and to the public.

Early Effects of the War in Europe.—The outbreak of the European War in 1914 had immediate and significant effects in the United States. The customary movement of imports and exports was rudely disturbed, and those business men and farmers, particularly in the south, who were dependent in large measure on trade with Europe, faced ruin. European holders of American stocks and bonds, facing the need of raising funds for war loans and taxes, rushed into the markets of the world to unload their securities, and the New York Stock Exchange for a time was closed to check the precipitate fall in prices. Foreign exchange (the ratio between the value of foreign moneys and of that of the United States) fluctuated erratically. The foreign merchant vessels in which most of the imports and exports of the United States had been carried no longer were available, German shipping having been driven from the seas and that of the Allies being busy with war activities.

Facing this emergency, the federal administration took what measures it could for relief. Arrangements were made by which cotton raisers, who were threatened with a partial

wiping out of the value of their product through the double loss of foreign markets and of shipping facilities, were provided with extended credit. The term of the Aldrich-Vreeland Currency Act (see Chapter XXXV, page 350) was extended for one year beyond the date, June 30, 1914, originally set for its expiration, and its provisions for the issuance of bank currency were made even more elastic. A Bureau of War Risk Insurance was created, through which the government undertook to compensate American merchants and ship-owners for the extraordinary risks of foreign commerce during the war.

The United States Shipping Board.—As the demand of the European belligerents for food, supplies, and munitions became more insistent, it was seen that the prosperity of American trade depended largely upon increasing the number of American vessels available for foreign commerce. This fact was emphasized by the ravages of German submarines among the merchant vessels of the United States and of the Allies. By an act of September 7, 1916, therefore, authorization was given for the appointment of the United States Shipping Board. The functions of this board, which were broadened when the United States entered the war, included general supervision of the shipbuilding program of the nation, regulation of foreign commerce, control of vessels, and training men for service in the merchant marine.

In April, 1917, the Emergency Fleet Corporation was organized under the United States Shipping Board, and this new organization, with a capital of \$50,000,000, began the rapid construction of merchant vessels. In 1916 the tonnage of American vessels engaged in foreign commerce was only 2,191,000; in 1920 it had increased to 16,324,000. During certain periods of the war the activities of the Emergency Fleet Corporation became a veritable race to build ships faster

than they were destroyed by German submarines, and thus keep up the necessary transportation of men, supplies, food and munitions to Europe.

The vessels remaining after the war from those constructed under the shipping emergency of 1917 and 1918 became a source of serious embarrassment to the government, which in some cases was unable either to utilize them or to sell them to advantage. The whole subject of maintaining the American merchant marine became a political issue, and during the administration of President Harding a proposal to grant a subsidy to vessels of the United States caused a serious division of opinion, even within the Republican party. The sixty-seventh Congress ended its existence in March, 1923, without having taken action on this subject.

The Council of National Defense.—Many functions connected with war-time control of industry were centered in the Council of National Defense. This body, authorized by an act of Congress passed August 29, 1916, was composed of the Secretary of War, the Secretary of the Navy, the Secretary of Agriculture, the Secretary of the Interior, the Secretary of Labor, and the Secretary of Commerce. To assist this council an advisory commission was appointed by the President, and subordinate committees—such as those on coal production, aircraft production, inland waterways, and shipping—were created. State councils of defense, and in some cases local councils, grew up as the war progressed.

Control of Food and Fuel.—Food and fuel soon were seen to be among the essential commodities which must be produced in large quantities and distributed equitably for the benefit both of the United States and of the European nations with which it was associated in the war. The so-called Food Control Act (it provided also for the control of "fuel, includ-

ing fuel-oil and natural gas; and fertilizers and fertilizer ingredients; tools, utensils, implements, machinery and equipment required for the actual production of foods, feed and fuel") was passed August 10, 1917. Under this act the United States Food Administration and the United States Fuel Administration were organized. These two administrations encouraged the production of essential food and fuel supplies and supervised their distribution. Partly through regulations limiting the use of sugar, wheat, meat, butter, and other foods, and partly through voluntary self-denial practiced by American citizens, large quantities of food were conserved for the use of the army in Europe and for export to allied countries where supplies had been wholly or partially exhausted. Farmers were encouraged to increase the output of certain essential foods, and city dwellers were urged to supplement their food purchases by the cultivation of "war gardens."

Through the change in dietetic habits of the people, brought about partly by regulations and partly through voluntary co-operation, the American consumption of corn, rice, and some other foodstuffs was largely increased, with a corresponding saving of huge amounts of wheat for shipment to Europe. This was desirable, partly on account of the age-long habits of Europeans, and partly because wheat, with its concentrated food value, is one of the grains best adapted for storage and shipment.

One provision of the Food Control Act authorized the President to purchase, in the name of the government, certain grains and other food products, and, in particular, to guarantee the price of wheat. In July, 1918, the government guaranteed the farmers of the country a price equivalent to \$2.26 a bushel for Number 1 northern spring wheat, delivered in Chicago. To finance the guaranteed price of wheat and the government purchases, there was created the Food Administration Grain Corporation. The capital of this commission, all of which

was provided by the government, was at first \$50,000,000 and later was increased to \$150,000,000. Through this corporation the government offered to purchase all wheat offered, at the guaranteed price.

The War Industries Board.—One of the most important bodies subordinate to the Council of National Defense was the War Industries Board, created July 28, 1917. This board co-operated with the Council of National Defense and with the government in regulating the production and purchase of war materials, in setting prices, in assisting corporations engaged in war manufactures, and in seeking to bring about the best distribution of capital, credit, materials, fuel, and labor. It was, in fact, the agency which connected the government with the many private corporations engaged in the production of essential war supplies.

The War Trade Board.—The War Industries Board, just described, was created to deal with problems of manufacture. The War Trade Board, on the other hand, was concerned with foreign commerce. It was appointed by the President, October 12, 1917, to assist the government in enforcing the numerous regulations relating to trade with foreign countries.

The War Finance Corporation.—The earlier regulations by which business and industry were controlled in the interest of the government's war activities had to do mainly with trade, with materials, and labor. It became apparent, however, that capital—the money or credit with which business could be financed—also ought to be distributed in such a way that it would be of the greatest benefit to the nation as a whole. In an effort to secure this distribution, Congress by an act of April 5, 1918, provided for the creation of a War Finance Corporation, with the Secretary of the Treasury as chairman.

This corporation was authorized to advance money to banks, to building and loan associations, and to corporations, when such advances were deemed to be in the interest of the war activities of the government. It also had power to issue bonds on its own authority, and to buy and sell securities of the United States. The War Finance Corporation served as the agency through which the government loaned money, directly or indirectly, to essential war industries.

The same act which created the War Finance Corporation provided for a Capital Issues Committee, with power to pass upon proposed issues of stocks and bonds. This committee had, in effect, authority to say whether or not a business enterprise should be allowed to secure new capital. The section of the law under which it was created provided that:

[It should have authority] to investigate, pass upon and determine whether it is compatible with the national interest that there should be sold or offered for sale or subscription any issues, or any part of any issue, of securities hereafter issued by any person, firm, corporation or association, the total or aggregate par or face value of which issue, and any other securities issued by the same person, firm, corporation or association since the passage of this act is in excess of \$100,000.

The War Labor Board.—The war created a serious shortage of labor. Industries were speeded up until their demands for men were vastly increased. At the same time, many thousands of men formerly engaged in industry were withdrawn for military service, while immigration of workmen from Europe had been at a low stage ever since the outbreak of hostilities in 1914. The result of this labor shortage was seen in rapidly increasing wages, in numerous strikes, in attempts by employers to draw men away from other employers by offers of higher pay, and in the threatened stoppage of some of the industries essential to the country's welfare.

It was asserted by some employers—and apparently statistical records in many instances support this charge—that as wages rose and hours of work were shortened, the average individual efficiency of labor grew less. This was due in part to the withdrawal of many of the younger and more able-bodied workers for war service, and in part to the perfectly natural psychological reaction to a condition of active demand and short supply. In the years of depression and unemployment that were destined to follow close on the heels of the war and post-war activity, a decided increase in the efficiency of labor was noted.

The manner of dealing with railroad labor problems has been already noted (see Chapter XXXVII, page 368). For other industries, the government, early in 1918, created the War Labor Policies Board and the War Labor Board. The Labor Policies Board concerned itself mainly with general principles relating to employment, acting, in effect, as an advisor to the government and to private employers. The War Labor Board, on the other hand, grappled directly with the problems growing out of employment relationships. It served as a court of appeal in disputes between employers and employees, and through mediation and conciliation sought to prevent strikes, lockouts, and other stoppage of work. The War Labor Board held many hearings on disputes between workmen and employers, and handed down awards which generally were accepted without question. In some instances the board prescribed methods—by shop committees (see Chapter XXVIII, page 284) or otherwise—by which future controversies in particular industries were to be adjusted.

TOPICS FOR REVIEW AND DISCUSSION

1. What were some of the causes of government control of business during the war?
2. What were some of the results, upon American business and industry, of the outbreak of hostilities in 1914?

3. Why were the southern cotton planters in danger of ruin after war broke out in 1914?
4. What was the Bureau of War Risk Insurance and what was the occasion for its establishment?
5. What led to the creation of the United States Shipping Board and the Emergency Fleet Corporation?
6. Why were Americans urged to eat more corn and rice and send wheat to Europe?
7. Describe the activities of the United States Food Administration.
8. What was the War Industries Board? The War Trade Board? The War Finance Corporation? The War Labor Board?
9. What was the service rendered by the Capital Issues Committee? Was its supervision over issuance of stocks and bonds justified?

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CHAPTER XXXIX

COMMERCIAL GROWTH, EXPANSION, AND INFLATION

Effects of World War.—Every considerable war interrupts the orderly progress of industry and commerce and deranges the economic systems of the nations concerned. The extent of this interruption and derangement depends upon the length and severity of the conflict and the number and importance of the belligerents. The World War, the greatest struggle in the history of the human race, was the cause of financial upheavals and industrial changes, the magnitude of which even yet has not been fully realized.

These effects of the war were less severe in the United States than in the European countries involved. The relatively small losses suffered by America, and its preponderance in resources of men and wealth, enabled the nation to survive the struggle with its business structure not seriously shaken. Even on this side of the Atlantic, however, the economic effects of the war were sufficiently serious. To some of these effects we shall turn our attention in this and the following chapter.

The panic of 1907 (see Chapter XXXV, page 350) interrupted but briefly the expansion of business, manufactures, and commerce which had characterized the greater part of the period following the Civil War. Within a few months, general business conditions were pushing forward toward their normal level, although real estate values were depressed for several years. Railroad earnings, as we have seen (see Chapter XXXVII, page 365), continued to be unsatisfactory, but the profits of manufacturing companies and of commercial concerns soon had recovered from the effects of the depression.

The country entered upon a period of general prosperity, marked by advancing prices and wages and ample employment for labor. The consolidation of business units and the organization of corporations of ever-increasing size, which we have already noticed (see Chapters XXI, XXIX, XXX), went steadily forward.

Effects of Outbreak of European War.—The outbreak of war in Europe, in the late summer of 1914, broke in roughly upon this condition of prosperity. There followed a brief period of severe depression, which largely was due to the interruption of trade with the European belligerents, and to the generally demoralized state of world commerce. We have noted (see Chapter XXXVIII, page 373) that the shipping of the Central powers was driven from the seas, and that the merchant vessels of England and her allies were utilized mainly for war purposes. The merchant marine of the United States being wholly inadequate for the needs of the nation's foreign commerce, the lack of shipping facilities was keenly felt.

Moreover, the blockades established by England and her allies, as the dominant naval powers, halted much of the commerce formerly carried on with Germany and Austria, and seriously hampered trade with European neutral nations. As a result of these conditions, there was a sudden and violent falling off in the European demand for grains, cotton, metals, and other commodities, and distress soon began to be felt by the producers of those articles.

Not only were foreign commerce and the industries dependent upon it thus throttled, but the financial system of the country was seriously upset by conditions across the Atlantic. In particular, prices of stocks and bonds were forced down by the action of European holders of American securities in offering these securities for sale in large quantities.

There was no lack of accusation that the depression of

business had been brought on in part by causes outside the European conflict. Opponents of the Democratic administration then in power attributed a part of the unfavorable condition to the Underwood Tariff Act (see Chapter XXXII, page 327), which had been enacted in 1913 and which had sharply reduced most of the import duties and, consequently, the degree of protection afforded to American manufacturers.

As a result of the interruption of foreign trade, the lost markets, and the other abnormal conditions immediately following the outbreak of the war, many business concerns were forced into bankruptcy and many others suffered severe losses. The effect was shown in part by the record of mercantile and industrial failures for 1915, which showed a total of 22,156 bankrupt firms, the largest number reported in one year for almost thirty years.

The Prosperity of the War Period.—Relief from this business stagnation came generously and speedily. Demand from Europe for the products of America soon revived. Before the war had finished its first year the persistent demand for foodstuffs, for metals and other raw materials, and for munitions, provided a foreign market greater than that of the pre-war period. The lack of buyers in central Europe was more than made up for by the enormously expanded demand from England, France, Italy, and the neutral countries. Exports to Europe increased from \$1,971,434,000 in 1915 to \$2,999,305,000 in 1916 and to \$4,324,512,000 in 1917.

With this increasing demand came advancing prices of commodities. The belligerent governments did not stop to haggle over prices, and other purchasers, of necessity, paid for goods at figures set by the European demand. Quotations on steel, copper, cotton, and leather advanced sharply and continuously. Grains, whether exported to Europe or sold to home consumers, brought constantly increasing figures.

Wheat, which had fallen to 89 cents a bushel during a part of 1914, advanced to \$1.66 in the early months of the following year, and in the years between 1916 and 1919 reached much higher figures. The government guaranty of wheat prices has been noted (see Chapter XXXVIII, page 376). Other farm products made similar increases. One result of this was seen in the advancing prices of farming land, which often reached figures exceeding those of any earlier period.

The conditions just described became even more marked when the United States entered the war in 1917. The demand from Europe became still more persistent, and the purchasing power of the allied governments was enhanced by large loans from the United States. In addition, the American government itself became a purchaser of food, clothing, munitions, machinery, and raw materials on an unprecedented scale.

Wages and Labor Conditions.—With the increasing demand for labor, due in part to the industrial expansion and in part to the withdrawal of many thousands of wage-earners for military service, and with the rapidly advancing cost of living making necessary a higher earning power, wages of workmen of all classes increased. Business was in the midst of a "seller's market," and the laborer, with his services for sale, was enabled to drive a hard bargain with the prospective purchaser. Never before in the United States had labor attained the position of power which it held during the war years and the period immediately following the armistice.

In most industries, the wages paid in 1920 were more than double those paid in 1914. The average hourly earnings of all wage-earners, estimated from statistics gathered from a large number of typical industries, stood at slightly more than 24 cents in July, 1914. From this figure it had mounted, by the middle of 1920, to 62 cents.

During the same period, labor organizations attained membership and power exceeding that of any former time in American history. The period was characterized by many strikes and threatened strikes, with the advantage usually on the side of the workers. Partly as a concession to the growing power of labor, a large number of employee representation plans and other methods of co-operation between employers and employees were installed. (See Chapter XXVIII, page 284.)

With his enhanced wages, the workingman became more than ever a good customer for the merchant, the manufacturer, and the seller of amusements. Together with most of the rest of the community, the average wage-earner gave little regard to thrift. His outgo increased fully as swiftly as did his income, and this in part through the mounting cost of necessities and in part through the waxing desire for luxuries. Laborer, employer, clerk, and professional man were soon engaged in a mad competition in spending money, which inevitably added yet more to the inflated level of prices. Withal, the public subscribed liberally to war loans, as we have seen, and all classes contributed generously to subscriptions for various charitable and war-work causes. This is perhaps the most creditable feature of the economic story of the period.

From the Armistice to 1920.—The armistice of November, 1918, ended hostilities in the World War. Industrial conditions, however, did not change materially through the closing months of 1918, the entire year 1919, and the early part of 1920. A temporary slowing up of demands for some products immediately after the armistice had little lasting effect. For the most part, until about the middle of 1920 business activity continued unabated, and prices and wages continued to advance. Many industries which during the period of war control had been denied their customary supplies of

materials, now thronged the market, bidding up prices and adding to the demand for commodities. Furthermore, it was believed that the needs of Europe for rebuilding devastated areas and repairing the damage done by war, would equal, if not exceed, those of the war period itself.

Prices of farm products, which had steadily increased from 1915 to 1918, reached yet higher levels in 1919 and the early months of 1920. Farmers, encouraged by the abnormal returns received for their products, made large purchases of land, buildings, and machinery, usually paying high prices. Many of these purchases were made on borrowed money. As a result of this extensive borrowing, the indebtedness of the agricultural population steadily increased, in spite of the large profits from crops.

Manufacturers, likewise, expanded their plants, already built to abnormal capacity to meet war demands, and they, like the farmers, borrowed money on the theory that business conditions would remain on the existing level. Between May, 1919, and May, 1920, the volume of loans by the banks of the country expanded by about 25 per cent.

Now, extension of credit exerts about the same influence upon business conditions as does expansion of currency. With the earnings of farmers, laborers, and business men on a higher scale than ever before, with employment ample and money plentiful, there came still higher prices; speculation was prevalent and extravagance was well-nigh universal. Conditions were similar to those which, in earlier chapters, we have learned to recognize as preliminary to a period of business collapse. The collapse began, in fact, in 1920, and before the close of 1921 it had become one of the most severe periods of business depression in the history of the country. This period of depression we shall consider in the next chapter.

TOPICS FOR REVIEW AND DISCUSSION

1. What were some of the effects of the outbreak of the European War upon American business?
2. What measures were taken to relieve the lack of shipping facilities? (See Chapter XXXVIII.)
3. Why was commerce with Germany and Austria stopped?
4. Why did not the prosperity which characterized the greater part of the war period begin in the summer of 1914?
5. Do you think the Underwood Tariff Act was a cause of the depression of 1914 and 1915?
6. Why did prosperity return quickly after the outbreak of the war?
7. What were some of the commodities most desired by the European belligerents?
8. Why did wages increase during the period between 1914 and 1920? Why did the strength of labor unions grow in the same period?
9. Describe business conditions in the period between the armistice and 1920.
10. Why did the debts of farmers increase when the prices of their products were advancing?
11. Does an expansion in the volume of currency or in the amount of credit available, increase prices? Does it stimulate business? (See also Chapter XXXIII.)

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CHAPTER XL

BUSINESS COLLAPSE, STAGNATION, AND RECOVERY

Causes of Business Depression.—For the period of financial depression which became severe in the later months of 1920, which continued through 1921, and from which recovery was not complete at the end of 1922, the causes must be sought in part in conditions outside the United States. During the war period, the productive capacity of the factories, the mines, and the farms of the country had been expanded far beyond the normal domestic demand. This excess capacity was kept occupied through 1919 and the earlier months of 1920 partly by actual sales to Europe and partly by anticipation of future foreign demands.

Conditions in Europe, however, were not favorable to a prolonged period of buying. The lately warring nations were staggering under burdens of debt, upon which in many cases even the interest was overdue. Most of them had issued huge sums of paper currency, the redemption of which in gold or silver was in some instances worse than doubtful.¹ On January 1, 1921, the national debts of the world were estimated at \$300,000,000,000, not counting the issues of paper money, which made up many billions more. Against this huge aggregate of debt there was held a gold reserve of only \$7,800,000,000.

Heavy exports to Europe, with relatively small imports from that continent, had by the early part of 1920 built up

¹ By some European countries, the inflation of paper currency was continued for several years after the close of the war. The currency in circulation in Germany on March 15, 1923, was 4,272,000,000,000 marks, and the mark was quoted in international exchange at about .0048 of a cent.

large balances due American exporters. This, even under normal financial conditions, would have had the effect of depressing foreign exchange; that is, the value of foreign money in terms of American money. The inflation of European currency and the growing belief that at least some of the European governments would become permanently insolvent, made the decline of foreign exchange much greater than otherwise it would have been. The money of even the most stable European governments fell to considerably below its face value in terms of American dollars, and the currencies of some nations, notably of Germany, Austria, and Russia, were worth only small fractions of their former values.

European Purchases Fall Off.—This decline in foreign exchange, by making the money of European buyers worth less in American markets than its normal value, diminished the purchasing power of the people whose wealth was measured in that money. They therefore reduced their purchases. It is probable, however, that even without this unsettlement of foreign exchange, exports to Europe would have fallen off as soon as the war demands and the most pressing needs of the early reconstruction days had been satisfied. The European nations, industrially and financially, were not in a position to purchase large quantities of goods abroad.

In the year 1920 exports to Europe amounted to \$4,466,000,000, and imports from Europe were valued at \$1,228,000,000. In 1921, exports fell to \$2,364,000,000 and imports to \$65,000,000.

This severe decline in export trade in itself would have been enough to cause an oversupply of goods and business stagnation in America. To it was added, however, in the middle and later months of 1920 a domestic "buyers' strike" resulting from high prices and from an increasing public realization that the prosperity of the preceding year had been of

an unhealthful type. From a nation of free spenders, the population of the United States turned suddenly to severe economies, and dealers in every class of commodities found themselves overstocked. As a result, prices fell rapidly. The first effect of the fall in prices was to discourage buying still further, as prospective purchasers held back in the expectation of even greater price recessions.

The Situation of the Farmers.—Among the sufferers from the slackening of the European demand and from the “buyers’ strike” in the United States, one of the first was the farmer. The falling off of export trade left him with immense stocks of foodstuffs, the price of which began a quick decline. In the autumn of 1920 and throughout all of 1921, many farmers sold their crops at less than it cost to produce them. The following figures, compiled by the United States Department of Agriculture, indicate the price declines on a few staples, in the earlier months of the depression :

	DECEMBER, 1920	DECEMBER, 1919
Wheat	\$1.443	\$2.151
Corn677	1.347
Oats472	.715
Cotton (per pound)140	.356

In 1921 the price decline continued. On January 1, 1922, the Department of Agriculture estimated that the average prices received by farmers were then about 24 per cent below those of January, 1921; about 59.4 per cent below those of January, 1920; and about 33.4 per cent below the January average of the preceding ten years.

Figures compiled by the National Grange showed the average combined crop and livestock prices, by years, as follows, starting with a base figure of 100 in 1913 :

1914.....	103
1915.....	98
1916.....	119
1917.....	185
1918.....	207
1919.....	213
1920.....	185
1921.....	122

It is true that from 1916 to the early part of 1920 farmers had sold their crops at high figures, but much of the resulting profit had been expended as a result of the increased cost of living and in the purchase, at high prices, of land, buildings, and machinery. As a rule the farmers were heavily in debt. Sometimes a farmer whose cattle were mortgaged to his local bank found himself, in the months of depression, unable to sell them for enough to pay the debt, and drove the herd up to the bank door and turned them over to the creditor.

The farmers, thus brought to the verge of destitution, endeavored to reduce their expenses. They thus joined the "buyers' strike," further reducing the demand for manufactured articles, fuel, and other commodities. This resulted in further losses to manufacturers and merchants and to deeper price cuts. The "high cost of living" which had characterized the war years and those immediately following the cessation of hostilities, declined rapidly.

Prices straggled downward irregularly until about the middle of 1921, when the speed of the decline was checked. During most of 1922 and in the early months of 1923, the price tendency was upward.

Statistics prepared by the United States Department of Labor show the following average wholesale price changes on typical commodities, in percentages of the average prices which prevailed during the year 1913 (not in per cent of increase) :

GROUP	MAY 1920	JUNE 1921	MAY 1922	JUNE 1922	DEC. 1922	JAN. 1923
Farm products	244	113	132	131	145	143
Food, etc.	287	132	138	140	144	141
Clothing	347	180	175	179	194	196
Fuel and lighting	235	187	216	225	216	218
Metals and metal products	193	132	119	120	131	133
Building materials	341	202	160	167	185	188
Chemicals, drugs	215	166	122	122	130	131
House furnishing goods	229	250	176	176	182	184
Miscellaneous	246	150	116	114	122	124
All commodities	272	148	148	150	156	156

A striking fact in connection with the price decline of 1920 and 1921 was that the reductions varied greatly between different items of expenditure. Thus, farm products fell rapidly to low levels, and their recovery was slow and, from the standpoint of the producer, inadequate. Prices of clothing likewise were deeply cut. On the other hand, rents and prices of fuel declined little, if at all, during the period under observation, and sometimes actually increased when other items of expenditure were going down. In the case of rents, the explanation is to be found mainly in the housing shortage which developed during a period in which building operations were curtailed in the interests of war industries. The continuing high prices of fuel were due to a variety of circumstances, among which the successful opposition of the miners to wage reductions was conspicuous.

Industry, Wages, and Unemployment.—As the demand for manufactured goods fell off, industries which had increased their capacities up to the limit of war-time demands found it necessary to reduce operations, and in some cases to suspend altogether. Among the first industries to be severely affected were those manufacturing motor cars, tires, and accessories.

With widespread losses and unemployment, there was a

decided reduction in the number of persons who believed that they could afford to maintain automobiles. By the early autumn of 1920, these establishments were operating, on the average, at little if any more than one-half capacity.

The steel industry, often characterized as the barometer of trade, was not seriously affected during the earlier months of the depression, largely because the steel plants in the last half of 1920 were at work mainly on orders booked at an earlier period. By about the middle of 1921, however, mills and furnaces were idle all over the country, and many thousands of steel workers were out of employment. In July, 1921, iron production was at 23.6 per cent of capacity.

Late in 1921 a slow revival of manufacturing began, and throughout 1922 the industries of the country were steadily improving their position and increasing their output. This improvement continued in the early months of 1923.

The slowing down of manufactures, mining, and other industries caused widespread unemployment. In January, 1921, the United States Employment Service in a survey of thirty-five states and the District of Columbia found 6,070,648 persons employed, compared with 9,402,000 in January, 1920. Between February, 1920, and February, 1921, the United States Bureau of Labor Statistics found the greatest falling off in employment in the hosiery and underwear industry, where the reduction was 44.2 per cent, and in the automobile industry, where the reduction was 41 per cent. Bituminous coal mining, with a reduction of 2 per cent, and cotton manufactures, with a reduction of 1 per cent, had remained most nearly normal.

Widespread unemployment, business depression, and the increase in the purchasing power of money (through reduced prices) caused a general reduction in wages. This reduction in some industries was brought about through agreement between employers and employees; in some it was imposed upon

workmen against their will; and in some it followed defeated strikes. In some industries workmen were able to prevent threatened wage reductions. We have seen in Chapter XXVII that this is what happened in the coal mining industry.

The average decline in wages is shown by figures compiled by the National Industrial Conference Board:

HOURLY EARNINGS (CENTS)			
	July, 1914	Peak, 1920	December, 1921
All wage earners.....	24.3	62.1	48.2
Common labor.....	20.7	54.6	39.8
Skilled labor (male).....	28	70	55.5
Women workers.....	15.6	41.7	34.7

It will be noted that the wage decline did not reach a point even approximately as low as that of 1914. This is due to several causes. The cost of living did not fall to the previous low levels, and throughout the period of business depression rents, fuel, and some other essential items remained as costly—in some instances even more so—as during the most prosperous part of the earlier era. Furthermore, labor generally had become accustomed to a higher standard of living than in the past, and usually succeeded in maintaining at least an approximation of this improved standard. Finally it may be mentioned that the power of labor unions, which during the period between 1916 and 1920 had become greater than ever before in American history, while seriously shaken in the era of unemployment, remained considerable enough to resist many attempts at wage reduction.

The figures for December, 1921, represented for most industries the minimum reached during the following twelve months. Late in 1922, in fact, there was a noticeable trend toward higher wages. By the spring of 1923, as we shall note more attentively in the following chapter, a shortage of some types of labor had made itself manifest, and wages were again approaching the figures of 1919 and 1920.

Commercial and Banking Failures.—In the year 1919, the number of commercial failures was smaller than in any year since 1881, and was the smallest on record, in proportion to the number of concerns doing business. Early in 1920 the number of failures began to increase, and in December of that year the number was greater than in any month since January, 1917, and the volume of liabilities was greater than in any month since monthly statistics of bankruptcies began to be kept in 1894. Mercantile and industrial insolvencies, by years, are shown in the following tabulation:

	NUMBER	LIABILITIES
1919.....	6,451	\$113,291,237
1920.....	8,881	295,121,805
1921.....	19,652	627,401,883

The number of failures in 1921 was the largest since 1915, and the liabilities aggregated the highest on record.

Banking failures in 1920 numbered 119, with liabilities totaling \$50,708,300; in 1921, 383, with liabilities of \$167,-849,555.

Banking and the Federal Reserve System.—Although the number of banking failures showed an increase, it was due in part to conditions independent of the financial and business depression. In fact, the “panic” of 1920 and 1921 was different from every similar crisis in the history of the country in that it was not primarily a banking or financial overturn. This was due in large measure to the Federal Reserve Law (see Chapter XXXV, page 351). With ample facilities by which a solvent bank could obtain supplies of currency as needed, depositors did not, as in the past, start runs on banks in efforts to realize cash upon their deposits.

The problems of the banks, however, were not always easy of solution. It has been estimated that from May, 1919, to

May, 1920, the volume of bank loans expanded about 25 per cent. This was due largely to excessive calls for credit in the period of expanding business which reached its climax about the end of 1919. When the succeeding depression brought stagnation in many lines of manufacture and trade, the bankers found that much of their loaned money had been transformed into "frozen credits"; that is, loans which, while many of them were good, could not immediately be collected. The farmers, in particular, were unable to pay their debts, and many of them sought additional loans to tide them over until the next harvests.

In this situation, many banks rediscounted their "commercial paper," or notes representing loans, at the federal reserve banks, receiving in return federal reserve notes, as provided by law. This secured for the banks an ample supply of currency, but it cut into the gold reserve of the federal reserve banks by increasing the volume of currency in comparison to the stock of gold on hand. In order to keep the volume of credit from getting beyond bounds, the federal reserve banks raised their interest rates. This action was reflected in the interest rates on securities in general. In 1920 and 1921 interest rates stood at high levels. On high-grade corporation bonds the rates reached an average of almost 8 per cent. This depressed the prices of all interest-bearing securities which had been issued in earlier periods of lower interest. Lack of public confidence further depressed security prices, as did the losses or reduced earnings of corporations.

In the later months of 1921 money became "easier," that is, more of it was offered, and at lower interest. This was due in part to reviving confidence, in part to the fact that there was less business to be financed, and that therefore there was less demand for credit, and in part to the reduced cost of labor and materials. The interest rates on commercial paper declined during the year from about 8 per cent to about 5 per

cent. This, with reviving confidence and improved earnings, brought stock and bond prices to higher levels.

The early months of 1923 found industry generally on a scale of operations which might be characterized as normal, at least compared with pre-war standards. The average of activity was brought up by a widespread activity in building, which was the natural consequence of several years during which building operations had been much below normal. All the more important manufacturing industries were operating at a high scale of production, and unemployment practically had disappeared. The steel industry reached an average output of about 90 per cent of capacity, and was prevented by a developing labor shortage from attaining an even higher rate of operation.

There remained, however, clouds in the business sky. The farmers of the United States were yet in serious difficulties, although the prices of their products generally had recovered from the low points of 1921. In addition, the unsettled conditions in Europe, politically and financially, rendered the time doubtful when that continent again could become a large buyer of American products. Foreign moneys—with the exception of the English pound, which had recovered almost its full value in comparison with the dollar—were still demoralized, and in the cases of the German, Austrian, and Russian currency, all thought of ultimate redemption at anything like face value had long since vanished.

Business men generally believed, however, that the industry of America, while perhaps destined for further set-backs before the effect of war-time world conditions had passed, was well on the way toward a resumption of its normal development.

TOPICS FOR REVIEW AND DISCUSSION

1. What were the European conditions which affected American industry in 1920? How had they changed since 1916; since 1918?

2. Why did European purchases fall off in 1920 and 1921?
3. What was the "buyers' strike" and what were some of its causes and effects?
4. Why were the farmers unable to offset the losses of 1920 and 1921 with the profits of the years immediately before?
5. What was the general course of wages from 1914 to 1921?
6. Why did not wages in 1921 return to the level of 1914?
7. Do you think the standard of living of the American workman has permanently improved over that of the pre-war period?
8. Why was there not a "bank panic" in 1920?
9. Why did interest rates increase in 1919 and 1920 and decline after about the middle of 1921?
10. Should business men have been able to foresee the depression of 1920 before it occurred? If so, why did they generally not do so?

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CHAPTER XLI

RESTRICTED IMMIGRATION AND A DEVELOPING LABOR SHORTAGE

Reversal of the Labor Situation.—In the business recovery to which we turned our attention in the preceding chapter, a prominent feature was the sudden overturn in the labor situation. At the lowest point of the depression of 1920-1922, it was estimated that perhaps 5,000,000 workmen were out of employment. At the beginning of 1923, with industry apparently just gathering momentum for a return to maximum activity, a distinct shortage of labor had appeared. Many factories reported that they were unable to secure manpower enough to enable them to operate either up to the limit of their mechanical capacity or up to the possibilities of the business in sight. Wages were advancing, and in some industries they had almost reached the 1920 peak. Coal miners, as we have observed (see Chapter XXVII, page 277), had no difficulty at the beginning of 1923 in maintaining a wage rate which represented an actual increase over the war-time level.

Causes of Labor Shortage.—This labor shortage was an outcome of the reviving industry of the country. In the past, however, industry generally had found that its resources of labor were sufficient at least for a period of moderate activity. Some other influences, evidently, were at work.

To search out these influences, let us note the classes of labor in which the shortage was felt most keenly.

First, there was a lack of many classes of building workmen. Masters of certain trades were not to be found in anything like the numbers which could have been employed. This

situation, however, was due in the main to the abnormal activity in building, following close upon a period in which construction had been so nearly suspended that many building tradesmen had found other employment and few new workers had been recruited. It was reasonable to assume that the building industry either would decline to a more nearly normal scale of operation, or that in time, through the high wages, it would be able to build up a sufficient staff of workers.

Then, certain classes of skilled factory labor were insufficiently manned. This was due in large measure to the partial breakdown of the apprenticeship system, which, in turn, was a result partly of the high wages paid for all kinds of labor during the war period. From 1916 to 1920 a youth had no difficulty in getting a job at unskilled or semiskilled labor, at which his earnings reached figures which effectively destroyed whatever attraction there otherwise might have been in the small earnings during a long apprenticeship in a skilled trade. Moreover, many boys had spent in military service the years in which they might have served apprenticeships.

More serious, in the eyes of employers, than any scarcity of skilled workers was the shortage of common labor. From all over the country industry sent up complaints that men who would handle picks and shovels were becoming each day harder to secure. A part of this shortage was due to unbalanced conditions, whereby some industries—notably coal mining—had an abundance or a superabundance of labor while others were undermanned, and whereby some sections of the country were well supplied with laborers while other districts were needy. There was no doubt, however, that the aggregate common labor supply of the United States was below the number which might have been employed.

Immigration as Source of Common Labor Supply.—To understand this situation, it is necessary to turn again to the

subject of immigration. In previous chapters we have learned that throughout the earlier history of the country immigration played an important part in increasing the population, in settling the west, and in building up industry. This immigration became yet more important after the forties of the nineteenth century, when a veritable flood of immigrants from Germany and Ireland landed on American shores. Later, the stream of alien arrivals grew yet stronger, but its source had changed. While considerable numbers of prospective citizens arrived from the British Isles and northwestern Europe, an increasing proportion of the immigrants were from southern and eastern European countries. The Italian, the so-called Austrian (usually a Hungarian or a Slav), and the Polish Jew became more and more prominent among the new arrivals.

To this stream of immigration, American industry throughout its development has been largely indebted for its supply of common labor. The native American early in the industrial growth of the country manifested a disinclination to operate with shovel or pick. The son of the immigrant developed similar prejudices. It was to the foreign-born worker, therefore, that the employer looked for the performance of the rougher and more laborious tasks.

Even in the period before the Civil War, as we have seen (see Chapter XIV, page 148), there was occasional protest against the free admission of immigrants. The sentiment of the country as a whole, however, generally was friendly to unrestricted immigration. The need for laborers to man the rapidly expanding industries was keenly felt, while, in addition, there was a well-nigh universal sympathy for those who, under pressure of economic necessity or of political or religious discrimination, sought admission to the United States.

In only two particulars was immigration seriously restricted in the nineteenth century. Chinese immigration prac-

tically was stopped, in deference to the protests of labor and of the white population of the Pacific coast states, and the importation of contract labor was forbidden—this latter act being a distinct triumph for organized labor, which had consistently fought for the repeal of the contract labor law enacted during the stress of Civil War needs.

Growth of Immigration in Twentieth Century.—In the first years of the twentieth century, immigration increased with a rapidity which became alarming to many sober-minded Americans. The number of aliens admitted in the fiscal year ended June 30, 1900, was 448,572. From this number there was a steady increase, until in the year ended June 30, 1907, the number of immigrants was 1,285,349. The depression and unemployment following the financial panic of that year caused a temporary let-up in the immigration stream, but by 1914 the number had again risen to 1,218,480. Then came the war in Europe, which for a time dried up the sources of emigration. By the year ended June 30, 1918, the number of aliens admitted dropped to the figure, without precedent for many years, of only a little over 100,000.

With the close of the war, immigration again began to gain. In the year ended June 30, 1921, the number of aliens rose to 805,228. By this time there were indications that a flood of immigration greater than any in the past was preparing to set in toward the American shores, and that, moreover, the new immigrants would be made up in considerable part of men and women crippled or made destitute by war, and of others who, for one cause or another, were not desired in their native lands.

Restriction by 3 Per Cent Law.—Confronted with this new immigration problem, which was made more acute by the prevailing unemployment situation of the times, Congress,

largely at the instance of organized labor, enacted the so-called "3 per cent law" effective May 19, 1921, under which immigration from a country in any one year was limited to 3 per cent of the number of natives of that country already resident in the United States, as shown by the census of 1910. This law, passed as an emergency measure, was to have expired by limitation on June 30, 1922, but it was extended for two more years.

Under the 3 per cent law, the total number of immigrants admissible during a single fiscal year was slightly more than 350,000—considerably less than half the average for several years before the World War. In the fiscal period ended June 30, 1922, the actual admissions did not greatly exceed 300,000—being, in fact, 309,556. This failure to admit immigrants up to the total number allowed by the law was due to the circumstance—disturbing to friends of the quota system—that the northwest European countries did not even fill the quotas to which they were entitled. On the other hand, the nations of southern and eastern Europe promptly filled their quotas, with many more would-be immigrants clamoring for admission.

By the early months of 1923, as we have seen, a shortage of common labor had developed in American industry, with a consequent widespread demand for a more liberal policy as to immigration. Organized labor, on the other hand, urged the retention of the 3 per cent limit, and in some instances even advocated more stringent restrictions.

Proposed Changes in Immigration Laws.—The proposals for liberalizing the immigration laws took, in the main, the following forms:

1. Many persons thought that the quota system ought to be abandoned altogether, or, if it was retained, that the percentage ought to be largely increased.

2. It was suggested that the quota, if retained at all, be applied on the basis of a census earlier than that of 1910. This suggestion was made in an effort to admit a larger proportionate number of northwestern Europeans, of the stock which composed the bulk of the earlier immigration. To this suggestion it was replied that these nations were not filling even the quotas permitted under the existing law.

3. Another proposal was to so far modify the contract labor law as to permit the selection of workers on the other side of the Atlantic, and their direction to industries—or at any rate to localities—where they were desired.

4. Many students of immigration advocated the creation of a commission to make an exhaustive investigation of the entire subject, as a basis for a thorough-going revision of the law at some future session of Congress.

None of these suggestions was followed by the sixty-seventh Congress, which terminated its work in March, 1923, without having enacted any important immigration law.

In the meantime American industry, having given up hope of any early relief through changes in the immigration laws, had set about to solve its own labor problems as best it could. Its efforts took the forms largely of increasing efficiency through wage and bonus incentives, and through better industrial relations methods; of the greater utilization of machinery, thus dispensing with a part of the common labor which otherwise would be employed, and of seeking to devise better development and distribution of the labor sources within the boundaries of the United States.

TOPICS FOR REVIEW AND DISCUSSION

1. What were some of the causes of the labor shortage of 1923?
2. Why has American industry depended largely upon immigration for its supply of common labor?
3. Trace the progress of immigration up to the enactment of the 3 per cent law. (See also Chapter XIV.)

4. What was the 3 per cent law and what were some of its effects?
5. Why has organized labor generally opposed unrestricted immigration?
6. What were some of the suggested changes in the immigration laws in the congressional session of 1922-1923?

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INDEX

A

AGRICULTURE,

- Colonial, 34
- Development of in west, 204
- Difficulties of in west, 206
- In north during Civil War, 183
- In south during Civil War, 184
- Settlement of west and, 201

ALDRICH-VREELAND BANKING LAW, 350

AMERICA,

- Becomes an industrial factor, 21
- Discovery of, 23-32
 - As an economic exploit, 24
- Exploration of, 23-32
- Industrial civilization of, roots of, 11
- Industrial development, 9
- Industries in colonial days, 33-41

AMERICAN FEDERATION OF LABOR, 263

AMERICAN INDUSTRY (See "Industry")

ANTI-TRUST LEGISLATION AND PROSECUTION, 312-320

ARBITRATION,

- Of industrial disputes, 281

AUTOMOBILE INDUSTRY, 248

B

BANKING, 21. (See also "Federal Reserve System")

- Aldrich-Vreeland Banking Law, 350
- Changing views on banks, 346
- During World War, 395
- Effect of panics on, 349
- First Bank of the United States, foundation of, 89
- National Bank Act of 1863, 347
- National bankingsystem, beginning of, 188
- National banks and federal reserve system, 346-356
- Second Bank of the United States, 92-101
- State banks under Andrew Jackson, 96

BANKRUPTCY,

"BLACK FRIDAY,"

- Gold speculation and, 196
- During World War, 395

BLAND-ALLISON SILVER PURCHASE ACT, 335

BUSINESS,

- Big business, 290-302
 - Attributes of, 290
 - Human element in, 291

BUSINESS—Continued

- Civil War conditions, 180-190
 - In north, 181
 - In south, 185
- Combination of units, 299
- Methods of organization, 292
- Panics and business cycles, 98
- World War,
 - Conditions subsequent to, 388-398
 - Control of during, 372-380
 - Decline of European purchases subsequent to, 389
 - Effects of, on, 381
 - Effects of, outbreak on, 382
 - Mobilization of for, 372
 - Prosperity during, 383
 - Subsequent depression, 388

C

CANALS,

- Era of canal building, 119
- Inland, construction of, 118
- Traffic, 224

CAPITAL, CONCENTRATION OF, 290-302

CAPITALISTIC PRODUCTION, RISE OF, 253

CARNEGIE, ANDREW, STEEL INDUSTRY AND, 304

CATTLE RAISING, WESTERN, 203

CENSUS, FIRST UNITED STATES, 63

CITIES,

- Electric transportation in, 225

CIVIL WAR,

- Business during, 180-190
- Causes of, 162-170
- Coinage during, 331
- Financial problems following, 191
- Impetus to agriculture during, 201
- Labor during, 180-190
- Payment of cost of, 171-179
- Tariff situation after, 322

CLAYTON LAW,

- Federal Trade Commission and, 317

CLEVELAND, GROVER,

- Tariff efforts of, 323

COAL,

- Age of, 229-238
- Anthracite coal strike of 1902, 270
- As fuel, 229
- Growth of industry, 229
- Modern utilization of, 231

- COAL—Continued**
 Strike of 1922, 275
 Use of,
 In iron smelting, 233
 In manufacturing, 136
- COINAGE,**
 Beginnings of system, 86
 Campaign of 1896, 340-345
 Civil War conditions, 331
 Controversies over, 330-339
 Latest developments, 340-344
 Republican victory of 1896, 342
- COLLECTIVE BARGAINING,** 144
- COLONIES, AMERICAN,** 29
 English, 29, 34
 Finance, 47
 Industries, 33-41
 Labor, 42-45
 Population, 46
 Struggle for independence, 50-58
 Transportation in, 113
- COLUMBUS, CHRISTOPHER,**
 Seeks northwest passage to India, 27
- COMBINATIONS** (See also "Trusts")
 Beginnings of in steel industry, 305
 Search for new methods of industrial, 301
- COMMERCE,**
 Britain discourages American, 65
 Early republic struggles against aggression in, 59-70
 Growth during World War, 381-387
 Growth of English, 17
 Restrictions, struggle against, begins, 64
- CONCILIATION, INDUSTRIAL,** 280-289
- CONSERVATION,**
 Vs. free use of resources, 230
- CONTINENTAL CONGRESS,**
 Fails to raise revenue, 83
 Financial problems of, 55
- CO-OPERATION,**
 Industrial, 280-289
 Unionism and, 285
- CORN,**
 Raised by settlers, 35
- CORPORATIONS,** 290-302 (See also "Trusts")
 Disadvantages of, 295
 Modern industry and, 293
- COTTON,**
 Culture of in southwest, 163
 Growth of culture in south, 156
- COUNCIL OF NATIONAL DEFENSE,** 375
- CURRENCY** (See also "Paper Currency")
 Campaign of 1896, 340-345
 Controversies over, 330-339
 Federal reserve system and, 353
 Latest developments, 340-345

D

- DEMOCRATIC PARTY,**
 Andrew Jackson and, 93
- DEMONETIZATION OF SILVER,** 332
- DISCOVERY,**
 Of America, 23-32
 As an economic exploit, 24

E

- ECONOMIC REVOLUTION** (See "Industrial Development")
- ECONOMICS,**
 Discovery of America an economic exploit, 24
 Economic freedom as cause of Revolution, 50
 Economic motives, importance of, 1
 English background, 9-22
 Historical study of value of, 2
 Key to history, 10
- ELECTRIC TRANSPORTATION,**
 City and interurban, 225
- EMPLOYERS,**
 Collective bargaining with, 144
 Growth of antagonism between labor and, 268
 Relations between employee and, 280
- ENGLAND,**
 Colonies planted by, 29
 Conquest of French territories by, 52
 Discourages American commerce, 65
 Economic background of America in, 9-22
 Extension of wool industry in, 16
 Growth of commerce in, 17
 Industrial revolution in, 18
 Root of American industrial civilization in, 11
- EXCESS PROFITS TAX,**
 World War and, 359
- EXPLORATION,**
 French, 28
 Of America, 23-32
 Portuguese, 28
 Spanish, 28

F

- FACTORIES** (See "Manufacturing")
- FAILURES, DURING WORLD WAR,** 395
- FARMERS,**
 Situation of, subsequent to World War, 390
- FARMING,**
 Wastefulness of, under plantation system, 158

FEDERAL RESERVE SYSTEM,
 Creation of, 351
 Currency under, 353
 During World War, 395
 Machinery of, 352
 National banks and, 346-356
 Operation of, 354
FEDERAL TRADE COMMISSION,
 Clayton Law and, 317
FEUDAL SYSTEM,
 Effects on industry, 12
FINANCE (See also "Paper Currency")
 Alexander Hamilton and national debt,
 84
 Colonial, 47
 Continental Congress, problems of, 55
 Failure of Continental Congress to raise
 revenue, 83
 First Bank of the United States, founda-
 tion of, 89
 Government assumes Revolutionary debt,
 85
 National credit, preservation of, 82
 Paper currency floods America, 55
 Problems,
 Following Civil War, 191
 Of reconstruction period, 191-200
 Public debt at close of Revolution, 82
 Railroads and, 215
 Revolutionary debts, payment of, 82-91
 Second Bank of the United States, his-
 tory of, 92-101
 World War and, 357-363
FIRST BANK OF THE UNITED STATES,
 Foundation of, 89
FISHERIES, COLONIAL, 37
FOOD,
 Control of during World War, 375
 Products, manufacture of, 248
FORESTS, COLONIAL, 37
FREE TRADE,
 Protection and, 123
FREEDOM (See "Independence")
FRENCH EXPLORATION, 28
FRENCH TERRITORIES,
 English conquest of, 52
FUEL (See also "Coal")
 Control of, during World War, 375
FUR TRADING,
 Colonial, 38

G

GALLATIN, ALBERT,
 Report of, on manufactures, 77
GOLD SPECULATION,
 "Black Friday" and, 196

GOVERNMENT DEPOSITS,
 Removed from Second Bank of the United
 States, 95
GOVERNMENT OPERATION,
 Railroads, test of, 364
GOVERNMENT REVENUE,
 Sources of, 125
GREAT PLAGUE,
 Effects of, 15
GREENBACKS,
 Depreciation of, 177
 Issue of, 175
 National heritage of legal tender curren-
 cy, 193
 Resumption of specie payments, 195

H

HAMILTON, ALEXANDER,
 National debt and, 84
 Report of, on manufacture, 77
HARRISBURG CONVENTION,
 Tariffs and, 127
HISTORY,
 Economic key to, 10
 Value of study of, 2
HOMESTEAD LAW, 201
HOMESTEAD STRIKE, 272

I

IMMIGRATION,
 Effect on labor, 150
 Growth of in twentieth century, 402
 Proposed changes in laws, 403
 Restrictions,
 By 3 per cent law, 402
 Subsequent to World War, 399-405
 Source of common labor supply, 400
INCOME TAX,
 World War and, 359
INDENTURED SERVANTS, 43
INDEPENDENCE,
 Economic and political, 50
 Struggle for, 50-58
INDIAN CORN (See "Corn")
INDUSTRIAL CIVILIZATION,
 Old-world roots of, American, 11
INDUSTRIAL CO-OPERATION, 280-239
INDUSTRIAL CONCILIATION, 280-289
INDUSTRIAL DEVELOPMENT,
 American, 9
 Intellectual evolution, 5
 Moral evolution, 6
 Physical evolution, 3
 Progress of, 3
INDUSTRIAL RELATIONSHIPS,
 Methods of improving, 286

INDUSTRIAL REVOLUTION,

Effect on labor, 20

In England, 18

INDUSTRIAL WORKERS OF THE WORLD, 264

INDUSTRY,

American,

Becomes a factor, 21

Development of, 7

Evolution of, 7

Features of, 59

Interpretation of, 7

Backwardness of the south in, 154

Colonial industries, 33-41

Conciliation within, 284

Control during World War, 372-380

Corporation in modern, 293

Development of large industrial units, 298

Feudal system, effects on, 12

Growth during World War, 381-387

Subsequent to World War, 392

INFLATION,

Taxation *versus*, 57

World War and, 381-387

INTERNAL REVENUE,

Taxes during Civil War, 173

INTERSTATE COMMERCE ACT,

Amendments of, 224

INVENTIONS,

Manufacturing and, 134

Steamboats, 115

IRON AND STEEL,

Age of, 229-238

Beginnings of industry, 75

Combinations, beginnings of in, 305

Competition in, 303

Growth of industry, 140

Increasing use of, 229, 235

Iron ores and localization of steel industry, 236

Production of, 232

Strikes,

Homestead strike, 272

Of 1919, 274

Use of coal in smelting, 233

J

JACKSON, ANDREW,

Attacks Second Bank of United States,

94

Democratic party and, 93

Nullifiers and, 129

Vetoes bill for new charter of Second

Bank of the United States, 95

JAMESTOWN, VA.,

Founded by London Company, 31

JEFFERSON, THOMAS,

Attempts to maintain neutrality in

Napoleonic Wars, 67

K

KNIGHTS OF LABOR, 261

L

LABOR (See also "Immigration," "Strikes")

Advance of, American, 251-259

American, condition before Civil War,

142-153

Antagonism,

And its results, 267-279

Growth of, 268

Arbitration of disputes, 281

Causes of shortage subsequent to World War, 399

Changing conditions of, 251

Classifications of, 143

Colonial, 42-45

Need of labor force, 42

Condition of early American earners, 78

During Civil War, 180-190

Employer and employee, relations between, 280

Growing importance of workers, 251

Immigration,

As source of supply, 400

Effects on, 150

Improved conditions of, 254, 258

Industrial, growing importance of, 142

Influence of land on, 103

Laboring classes,

Effects of industrial revolution on, 20

Origin of, 14

Legislation for benefit of, 256

Movement,

Advance of after 1820, 146

Panic of 1837 and, 147

Organizations,

Beginnings of American, 79

Development of, 260-266

Public labor tribunals, 281

Results of development, 267

Shortage of, subsequent to World War, 399-405

Southern white,

Degradation of, 157

Emigration of, 157

Unions,

Advance of movement, 260

Co-operation and, 285

National labor, 261

World War conditions, 384

LAKE TRAFFIC, 224

LAND,

- Abundance of fundamental in American history, 102
- Government and public, 106
- Influence on labor, 103
- Land claims of states, 62
- States cede to United States government, 62

LEGAL TENDER CURRENCY (See "Greenbacks")

LIBERTY BONDS,

- Fluctuating price of, 361

LIVESTOCK,

- Raising of in colonies, 36

LONDON COMPANY,

- Jamestown founded by, 31

LOUISIANA, PURCHASE OF, 109

LUMBER INDUSTRY, COLONIAL, 37

M

McKINLEY, WILLIAM,

- Tariff bill of, 323

MACHINERY,

- England tries to retain secrets of, 72
- Manufacturing of, 248

MANUFACTURING,

- Beginnings of in United States, 71-81, 133
- Causes of early industrial changes, 71
- Causes of industrial growth, 239
- Colonial, 38
- England tries to retain machinery secrets, 72
- Forty years' progress in, 133-141
- Growth of in United States, 71
- Growth of output, 242
- Increase of after 1820, 134
- In north,
 - Before Civil War, 138
 - During Civil War, 182
- In south, during Civil War, 184
- Inventions and, 134
- In west, before Civil War, 138
- Mechanical devices in, 135
- Steady gain in manufactures, 239
- Supremacy of, 239-250
- Tendencies in American, 242

MEAT PACKING INDUSTRY, 246

- Dissolution of "trust," 318

MERCANTILE THEORY,

- Effect of on colonies, 51

MEXICAN WAR, 166

MIDDLE AGES,

- Feudal system and its industrial effects, 12

MIDDLE AGES—*Continued*

- Trade routes of, 25
 - To Orient closed, 26
- MIGRATIONS, NATIONAL, 23
- MINT,
 - Establishment of, 87
- MISSISSIPPI,
 - Migration into Mississippi Valley, 107
- MISSOURI COMPROMISE, 164
- MONEY (See also "Coinage," "Currency," "Silver")
 - Cheap money agitation, 333
 - Colonial, 47
- MOTOR TRAFFIC, 226

N

NAPOLEON, WARS OF,

- Effect on United States, 65

NATIONAL BANKS,

- Act of 1863, 347

NATIONAL CREDIT,

- Preservation of after Revolution, 82

NATIONAL DEBT,

- Alexander Hamilton and, 84
- Paid off, 97

NATURAL RESOURCES,

- Conservation *versus* free use of, 230

NAVIGATION ACTS,

- Effect on colonial trade, 52

NEUTRALITY,

- Jefferson attempts to maintain during Napoleonic Wars, 67

NEW WORLD (See "America")

NORTH, THE

- Agriculture in, during Civil War, 183
- Business conditions during Civil War, 181
- Manufacturing in, 138
- During Civil War, 182

NOTES,

- Decline of issue of, 348

O

OHIO,

- Migration into Ohio Valley, 107

ORIENT,

- Turks close trade routes to, 26

P

PACKING INDUSTRY, 246

- Dissolution of "trust," 318

PANICS,

- Business cycles and, 98
- Effect on banks, 349

PANICS—*Continued*

- Of 1837, 98
 - Labor movement and, 147
 - Recovery from, 148
- Of 1873, 197-200

PAPER CURRENCY,

- America flooded with, by Continental Congress, 55
- Greenbacks,
 - Depreciation of, 177
 - Issue of, 175

PAYNE-ALDRICH LAW, 326

PILGRIMS, COMING OF, 33

PITTMAN SILVER PURCHASE ACT, 343

PLAGUE,

- Effects of Great Plague, 15

PLANTATION SYSTEM,

- Wastefulness of farming under, 158

PLYMOUTH,

- Founded by Plymouth Company, 31

POLITICAL FREEDOM,

- As cause of Revolution, 50

POPULATION,

- Colonial, 46
- First United States census, 63
- Increased industrial, since Civil War, 251

POPULIST PARTY, 341

PORTUGUESE EXPLORATION, 28

POWER,

- Coal as fuel for, 229

PROFIT-SHARING,

- Stock ownership and, 287

PROTECTION (See "Tariff")

PUBLIC LABOR TRIBUNALS, 281

PUBLIC LANDS,

- Government and, 106

R

RAILROADS,

- Beginning of, 120
- Building after 1860, 213
- Combinations, 217
- Expansion and consolidation, 211-220
- Finance, 215
- Government operation during World War, 364
 - Effect of, 367
 - Test of, 364
- New need for extension, 212
- Pools, 217
- Rates, 215
- Regulation of, 221-224
 - By federal government, 222
 - Early, 221
- Return of, to private operation, 369

RAILROADS—*Continued*

- Situation of,
 - At outbreak of World War, 366
 - Before World War, 365
 - Strike of 1877, 270
 - Transcontinental, 214
- RECONSTRUCTION PERIOD,
- Financial problems, 191-200
- REPUBLIC,
- Boundaries of early American, 61
 - Early days of the American, 59-70
- REVOLUTIONARY WAR, 54
- Debts
 - Assumed by government, 85
 - Payment of, 82-91
 - Transportation during, 113
- RIVER TRAFFIC, 224
- ROADS,
- Early efforts to improve, 114

S

SECOND BANK OF THE UNITED STATES, 92-101

SERVANTS,

- Indentured, 43

SETTLERS,

- Occupations of western, 109

SHERMAN LAW, 314

- Early prosecutions under, 315

SHERMAN SILVER PURCHASE ACT, 336

- Repeal of, 337

SHIPBUILDING, COLONIAL, 37

SILVER,

- As political issue, 330-339
- Bland-Allison Silver Purchase Act, 335
- Demonetization of, 332
- New political alignments of 1896, 340
- Pittman Silver Purchase Act, 343
- Republican victory of 1896, 342
- Sherman Silver Purchase Act, 336
- Repeal of, 337

SLAVERY,

- Beginning of in America, 154
- Beginning of Colonial, 45
- Economic effects of, 159
- In new states, 164
- New problems due to new possessions, 168
- Renewal of controversy, 169
- Spread of, into west, 162

SMELTING,

- Use of coal in iron, 233

SOUTH, THE, 154-162

- Agriculture in, 208

- During Civil War, 184

SOUTH, THE—Continued

- Business conditions in, during Civil War, 185
- Industrial backwardness of, 154
- Manufacturing in, during Civil War, 184
- Secession of, 169
- War finance in, 177
- SOUTHWEST, THE,**
 - Cotton culture in, 163
- SPANISH EXPLORATION,** 28
- SPECIE PAYMENTS,**
 - Resumption of, 195
- SPECULATION,**
 - Gold and "Black Friday," 196
 - In gold and commodities during Civil War, 187
- STANDARD OIL Co.,**
 - Dissolution of, 316
- STATE BANKS,**
 - Inflation and speculation under Andrew Jackson, 96

STATES,

- Land claims of, 62
- Lands ceded to United States government by, 62

STEAM POWER,

- Growing importance of, 136

STEAMBOATS,

- Invention of, 115
- Transportation on Ohio and Mississippi, 117

STEEL (See "Iron and Steel")

STEEL STRIKE OF 1919, 274

STOCK,

- Profit-sharing and ownership of, 287

STRIKES,

- Anthracite coal strike of 1902, 272
- Coal strike of 1922, 275
- Homestead strike, 272
- Railroad strike of 1877, 270
- Steel strike of 1919, 274

T

TARIFF,

- Cleveland's efforts and defeat, 323
- Democrats and Underwood, 327
- Free trade vs., 123
- Importance of issue, 321
- Legislation during Civil War, 173
- Legislation 1789-1857, 123-132
- McCumber-Fordney tariff, 327
- McKinley bill, 323
- Of 1789, 124
- Of 1816, 126
- Of 1824, 126
- Of 1828, 127

TARIFF—Continued

- Of 1832, 127
- Of 1833, 129
- Of 1842, 129
- Of 1846, 130
- Of 1857, 131
- Of 1883, 323
- Of 1897, 326
- Payne-Aldrich Law, 326
- Progressive protection in laws, 321-329
- Situation after Civil War, 322
- Wilson bill, 325

TAXATION,

- Colonial, new policy adopted by Parliament, 53
- Inflation vs., 57

TAXES,

- Excess profits tax, World War and, 359
- Income tax, World War and, 359
- Internal revenue, during Civil War, 173
- World War, effects of, 359

TEXAS, SETTLEMENT OF, 166

TEXTILE INDUSTRY, 245

- American manufacturers, 139
- Beginnings of, 74

TOBACCO,

- Raising of in southern colonies, 36

TRADE,

- Effect of Navigation Acts on Colonial, 52
 - Neutral trade during Napoleonic Wars, 66
 - Routes,
 - Columbus seeks new, 27
 - Medieval, 25
 - To Orient closed, 26
 - World War, control of, during, 372-380
- TRANSPORTATION (See also "Canals," "Railroads")**
- Colonial and Revolutionary, 113
 - Development of, 112-122, 224-228
 - Electric, city and interurban, 225
 - Importance of, 112
 - Motor traffic, 226
 - National dependence on, 211
 - World War problems, 364-371

TREASURE,

- Early search for, 33

TREASURY,

- Independent Treasury established, 100

TREASURY NOTES (See "Greenbacks")

TRUSTS,

- Anti-trust legislation and prosecution, 312-320
- Opposition to, 312
- Rise of legal, 300
- Sherman Law, 314
- Early prosecutions under, 315

TYLER, JOHN,
Whigs and, 129

U

UNDERWOOD TARIFF,
Democrats and, 327

UNEMPLOYMENT,
Subsequent to World War, 392

UNIONISM,
Tendencies of, 143

UNIONS,
Advance of movement, 260
National labor, 261

UNITED STATES,
Boundaries of early, 61
Early days of 59-70
Napoleon's wars, effect of, on, 65
States cede lands to, 62
World War, early effects of in, 372

UNITED STATES MINT,
Establishment of, 87

UNITED STATES SHIPPING BOARD, 374

UNITED STATES STEEL CORPORATION, 303-311
As typical industrial unit, 303
Beginning of combination, 305
Birth of corporation, 306
Carnegie and, 304
Competition and, 303
Expansion of, 309
Investigation of, 309
Litigation concerning, 309
Method of forming consolidation, 308

W

WAGES,
Colonial, 42
World War, 384
Subsequent to, 392

WAR (See also "Civil War," "World War")
Economic consequences of, 180
Napoleonic Wars,
Effect on United States, 65
Jefferson tries to maintain neutrality during, 67

WAR FINANCE CORPORATION, 377

WAR FOR INDEPENDENCE (See "Revolutionary War")

WAR INDUSTRIES BOARD, 377

WAR LABOR BOARD, 378

WAR LOANS, CIVIL WAR, 174

WAR OF 1812, 68

WAR TRADE BOARD, 377

WEST, THE,
Beginning of large-scale migration, 105
Cattle raising in, 203
Conquest of, 102-111
Manufacturing in, 138
Occupations of settlers, 109
Settlement of, and agriculture, 201-210
Spread of slavery into, 162
Swift development of, 104

WHIGS,
John Tyler and the, 129

WILSON, WILLIAM L.,
Tariff bill of, 325

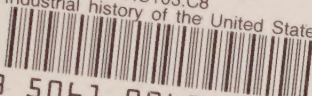
WOOL INDUSTRY,
Extension of in England, 16

WORKINGMEN,
Conditions of before Civil War, 149

WORLD WAR,
Banking during, 395
Bankruptcy during, 395
Business conditions subsequent to, 388-398
Business depression subsequent to, 388
Commercial growth during, 381-387
Control of industry during, 372-380
Decline of European purchases subsequent to, 389
Early effects in United States, 372
Effects of outbreak of, on United States, 382
Effects on business, 381
Excess profits tax, 359
Farmers' situation, subsequent to, 389
Federal reserve system during, 395
Finance during, 357-363
Government borrowing during, 360
Immigration restrictions subsequent to, 399-405
Income tax, 359
Industry subsequent to, 392
Inflation during, 381-387
Labor conditions during, 384
Labor shortage subsequent to, 399-405
Outbreak of, 357
Payment of cost, 357
Prosperity during, 383
Railroads, government operation of, during, 364
Effect of, 367
Taxes, effect of, 359
Transportation problems, 364-371
Unemployment subsequent to, 392
Wages during, 384
Wages subsequent to, 392

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